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IDENTIFIERS	Australia; France; Germany; Malaysia; Philippines; *South Korea; United Kingdom; Vietnam

ABSTRACT

This document contains 19 papers and case studies, in English and Korean, from a conference on national strategies for developing human resources through technical and vocational education and training. The following are representative: "The Need to Innovate and Optimize Resources [Keynote]" (Wataru Iwamoto); "School to Work Transition in Australia" (Katrina Ball); "Main Issues for Effective Transition System from Initial Education to Working Life in Korea" (Hojin Hwang); "School to Work Transition of the Graduates in the Trade Technical-Vocational Institutions in the Philippines" (Renato Sorolla); "Vocational and Technical Education and Training in Vietnam and Issues of School-to-Work Transition" (Hoang Ngoc Vinh); "Effective Reskilling for Adults [Germany]" (Gisela Dybowski); "Adult Reskilling in Korea" (Young-Hyun Lee); "The National Qualification System for Linking Schools and Workplace in Indonesia" (Masriam Bukit); "The National Qualification System for Linking Schools and Workplace" (Annie Bouder); "The Current Status of National Qualification System in Korea" (Jeong-yoon, Cho); "The National Skill Qualification System Framework in Malaysia" (Sahar Darusman); and "National Human Resource Planning: Issues and Problems" (Kioh Jeong). Papers include abstracts, and, in some cases, reference lists. Included are the welcoming remarks, conference program, and participant list. (KC)

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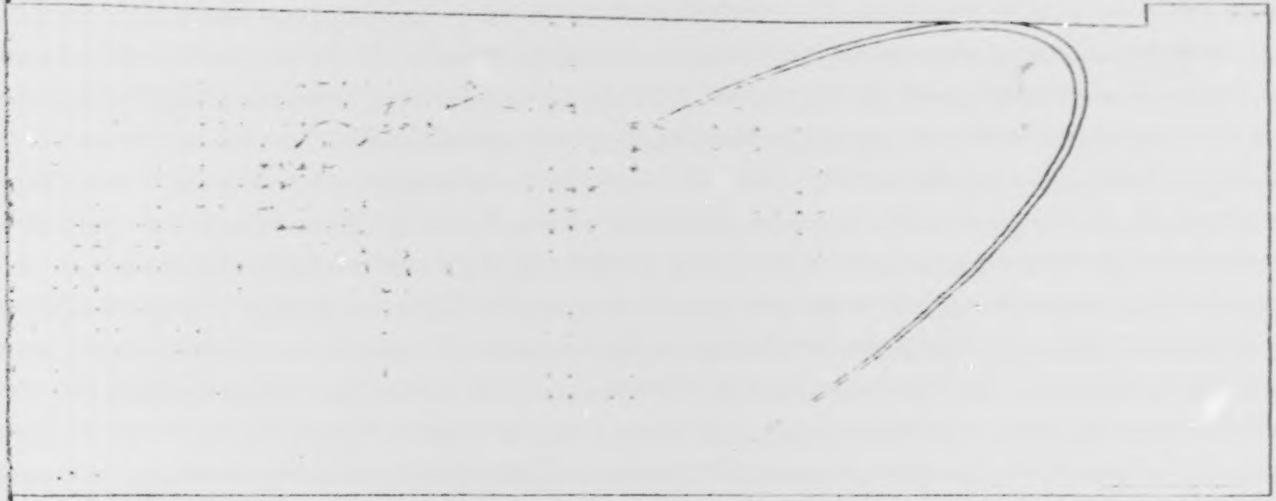
2001년도 KRIVET
직업기술교육훈련 국제회의 결과보고서

The 2001 KRIVET International Conference on Technical and Vocational Education and Training

2001. 11. 21 ~ 23



직업기술교육훈련을 통한 인적자원개발 국가 전략

National Strategies for Developing Human Resources through Technical and Vocational Education and Training

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머리말

지식기반사회로의 진전은 한 국가 및 세계 경제·사회환경의 급속한 변화를 초래하고 있다. 노동, 천연자원, 자본 등 과거 물적 자원이 중요한 생산자원으로 기능하던 산업사회에서 적용되던 수확체감의 법칙은 지식 및 정보가 핵심 생산자원이 된 지식기반사회에서는 수확체증의 법칙으로 대체되고 있다. 새로운 지식과 정보의 생성, 확산, 보급, 활용의 정도가 바로 인간에게 내재된 인적자원의 질과 양에 의해 결정되기 때문에 세계 각 국은 양질의 인적자원 양성에 박차를 가하고 있다.

우리 나라도 지금까지와는 다른 관점에서 그간의 인적자원 관련 정책을 진단하고 이에 터하여 21세기의 새로운 환경에 맞는 국가 인적자원개발체제를 구축하고자 노력하고 있다. 교육부를 교육인적자원부로 개편하고 그 장관을 부총리로 격상시켜 인적자원개발 관련 국가 정책을 총괄·조정토록 한 것이 그 대표적인 예이다. 영국, 싱가포르, 남아프리카 공화국 등 많은 나라들도 보다 효과적인 국가 인적자원개발을 위하여 관련 정부 조직을 개편하고 국가 차원의 인적자원개발 계획을 수립·추진하고 있다.

아시아·태평양 유네스코 회원국과 유럽 선진국들이 국가 인적자원개발을 위하여 어떠한 정책적 노력을 기울이고 있는가를 분석·논의하고 각 국에의 정책적 시사를 추출하기 위하여 본 원은 직업기술교육훈련을 통한 인적자원개발 국가 전략이라는 주제로 2001년도 한국직업능력개발원 직업기술교육훈련 국제회의를 11월 21일부터 23일까지 서울 교육문화회관에서 개최하였다. UNESCO 아시아·태평양 지역 우수센터(Regional Center of Excellence)로서 본 원이 주최한 이번 국제회의에서는 구체적으로 학교에서 직업세계로의 전이, 성인을 위한 재교육·재숙련, 교육훈련시장과 노동시장간의 연계를 위한 국가 자격제도, 그리고 직업기술교육훈련을 통한 인적자원개발 국가 전략 등의 소주제가 집중적으로 논의되었다.

이 보고서는 이번 국제회의 시 발표된 기조 발표 원고, 각 주제별 주제발표 원고 및 토론 내용, 개회사, 축사, 회의일정표, 그리고 참가자 명단 등을 수록

하고 있다. 향후 아시아·태평양 지역을 비롯한 유럽 각 국의 직업기술교육훈련 및 국가 차원의 인적자원개발 정책 추세를 가늠하고 각 국의 직업교육훈련 분야 경험과 정책 노하우를 공유함으로써 아·태지역 국가간 이해와 협력을 증진하고 새로운 정책 대안을 모색하는데 이 보고서가 중요한 연구자료로 활용되기를 기대한다. 끝으로 이번 국제회의를 준비하고 이 보고서를 발간하는데 헌신적인 노력을 하여 준 국제회의 사업준비팀의 노고를 치하하는 바이다.

2001년 12월

한국직업능력개발원
원장 강무섭

CE083472

The 2001 KRIVET International Conference on TVET

National Strategies for Developing Human Resources through Technical and Vocational Education and Training

21 ~ 23 November 2001

CONFERENCE PROCEEDINGS

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Ⅰ. 국제회의 사업 개요

1. 필요성 및 목적

가. 사업의 필요성

- 세계화(globalization) · 정보화 · 네트워크화의 진전에 따라 부가가치를 창출하는 핵심요소가 유형 자원이나 물적 자원이 아닌 지식과 정보 등과 같은 무형자원 그리고 지식과 정보를 보유한 창의적 인적 자원으로 변화하고 있음. 또한 인구의 고령화 추세는 고령인구 부양을 위한 경제활동인구의 양적 확보 및 질적 향상의 필요성을 요구하고 있음.
- 이러한 변화의 움직임은 학생들이 학교에서 직업세계로 효과적으로 진입할 수 있어야 하고 노동시장에 진입한 이후에도 고용가능성(employability)의 지속적 유지를 위해 계속적인 재교육과 훈련을 받을 수 있는 지원시스템의 구축을 요구하고 있음.
- 세계 각국과 국제기구는 이러한 변화의 흐름에 발맞추기 위해 학교교육의 현장성을 강화하고 있고 교육훈련시장과 노동시장간의 효과적인 연계를 위한 각종 대책을 수립하고 있으며 이를 위한 방안의 하나로서 자격제도의 정비를 추진하고 있음.
- 우리 나라도 이러한 외적 환경의 변화와 세계적인 흐름에 발맞추기 위해 그간 교육개혁 추진, 직업교육훈련체제 개편, 평생교육의 진흥 등 국민 개개인의 역량을 강화하기 위한 인적자원개발정책을 꾸준히 추진하여 왔음. 그러나 여전히 우리 나라의 인적자원개발체제는 높은 청년 실업률, 학교교육에 대한 산업체의 불만, 시장의 수요에 반응하지 못하는 자격제도 등 적지 않은 문제를 안고 있어 지식기반사회의 빠른 변화에 대응하기에는 한계가 있음.
- 이런 상황에서 정부는 지난 1월 인적자원개발정책의 종합성과 일관성을 확보하기 위하여 교육부를 교육인적자원부로 개편하고 교육인적자원부 장관을 부총리로 승격시켜 국가 인적자원개발정책을 총괄 · 조정하도록 한 바 있음.

- 이러한 정부의 움직임은 우리 나라의 인적자원개발정책이 과거와는 다른 새로운 체제와 방식으로 추진될 필요가 있음을 강하게 시사하고 있다고 할 수 있고 이런 상황에서 직업기술교육훈련분야에서의 인적자원개발에 대한 세계·주요 국가의 경험과 성공사례는 국가 인적자원개발의 새로운 패러다임을 모색하고 있는 우리 나라 정부에 중요한 정책적 시사를 제공할 것으로 판단됨.
- 동시에 세계화 · 정보화 시대에 부응하는 인적자원개발 정책을 개발하고, 세계 각국 및 주요 기관과의 지속적인 연계를 구축하며 유네스코 직업기술교육훈련 아 · 태지역 우수센터(Regional Center of Excellence)로서 아 · 태지역 국가들에게 직업기술교육훈련에서의 인적자원개발을 위한 새로운 정보와 정책동향을 파악할 수 있도록 하기 위해 세계 주요 연구기관이 참여하는 국제 세미나를 개최하는 것은 매우 유익하다고 판단함.

나. 사업의 목적

- 국가적 관점에서 인적자원개발의 비전과 목표를 설정하고 이를 실현하기 위한 체계적 · 종합적인 정책방안을 개발하는 데 유용한 정책적 시사와 정보를 습득
- 국가적 관점에서 인적자원개발정책을 종합적으로 추진하고 있는 주요 국가들의 국가전략(National Strategy)에 관한 정보 교류
- 직업기술교육훈련에 관한 세계 주요 연구기관들의 인적자원개발에 관한 핵심적 이슈에 대한 최근의 연구 동향 파악
- 한국의 인적자원개발 관련 정책의 국제적 관점에서의 점검- 아 · 태지역 우수센터로서 아 · 태지역 국가들에게 선진 사례에 관한 정보를 제공하고 아 · 태지역 국가들의 움직임 상호 교류의 장 마련
- 세계 주요 연구기관과의 연계 강화

2. 국제회의 내용

가. 국제회의 명칭

- 2001년도 KRIVET 직업기술교육훈련 국제회의

나. 주제(Theme)

- 직업기술교육훈련을 통한 인적자원개발을 위한 국가 전략(National Strategies for Developing Human Resources through TVET)
  - · 학교에서 노동시장으로의 효과적인 진입
  - · 노동시장에서의 효과적인 재교육 · 훈련
  - · 학교와 노동시장의 연계를 위한 자격제도의 정비
  - · 인적자원개발을 위한 국가 전략

다. 일시 및 장소

- 일시: 2001. 11. 21~23
- 장소: 서울교육문화회관

라. 후원기관

- 교육인적자원부, UNESCO 파리 본부, UNESCO 한국위원회

마. 참가자

- 약 100명 내외
  - · 국내: 한국직업능력개발원, 교육인적자원부, 국내학회 등 90여명
  - · 국외: 프랑스(CEREQ), 독일(BIBB), 호주(NCVER), 영국(British Council in Korea) 등 10개국 14명

바. 행사일정

- 1일차 오전(Opening Ceremony) (11월 21일, 10:00~12:00)
  - · 사회: 김하연 한국직업능력개발원
  - · 개회사: 강무섭 한국직업능력개발원장
  - · 환영사: 김여수 UNESCO 한국위원회 사무총장
  - · 한국직업능력개발원 소개
  - · 기조강연: Wataru Iwamoto UNESCO 파리 본부 직업기술교육과장

- 1일차 오후(Session 1) (11월 21일, 14:00~17:00)
  - · 의제: 학교에서의 직업세계로의 효과적인 진입
  - · 사회: Dr. Eun-sang Cho (KRIVET)
  - · 발표: Ms. Katrina Ball (Australia)
    Mr. Hojin Hwang (Korea)
    Dr. Renato M. Sorolla (Philippines)
    Dr. Hoang Ngoc Vinh (Vietnam)

- 2일차 오전(Session 2) (11월 22일, 09:30~12:30)
  - · 의제: 성인을 위한 재교육 · 재훈련
  - · 사회: Dr. Ki-sung Lee (KRIVET)
  - · 발표: Dr. Gisela Dybowski (Germany)
    Dr. Young-hyun Lee (Korea)
    Dr. Masriam Bukit (Indonosia)

- 2일차 오후(Session 3) (11월 22일, 14:00~17:00)
  - · 의제: 학교와 노동시장의 연계를 위한 자격제도의 정비
  - · 사회: Dr. Myong-hoon Shin (KRIVET)
  - · 발표: Ms. Annie Bouder (France)
    Dr. Jeong-yoon Cho (Korea)

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Mr. Silamay Sopraseuth (Lao P.D.R.)

Mr. Sahar Darusman (Malaysia)

- 3일차 오전(Session 4) (11월 23일, 09:30~12:30)
  - · 의제: 인적자원개발을 위한 국가 전략
  - · 사회: Dr. Sung-Joon Paik (KRIVET)
  - · 발표: Dr. Brendan Barker (United Kingdom)

    Dr. Ki-oh Jeong (Korea)

3. 활용방안 및 기대 효과

- 국가 인적자원개발 주요 정책 방안 개발을 위한 기초 자료 제공
- 국가 인적자원개발을 위한 중·장기계획 수립의 기초 자료 제공
- 우리 나라 관련 학회와 다른 국가 참가자들과의 인적 네트워크 형성 지원
- UNESCO 지역센터로서의 역할 강화 및 직업기술교육훈련분야 국제협력에서의 지도력 확보

Ⅱ. 기 조 강 연

– The Need to Innovate and Optimize Resources –

Wataru Iwamoto

The Need to Innovate and Optimize Resources

Wataru Iwamoto
Director, Division of Secondary, Technical and Vocational Education
UNESCO Headquarters, Paris

At the beginning of the twenty-first century we are confronted with a world scenario that even the most perceptive planners would not have foreseen a year ago. The inter-dependent global economy is in disarray, our way of life appears threatened, fear and uncertainty is all around and the grim prospect that the poor will become poorer seems more likely than ever.

Three weeks ago we concluded the 31st session of UNESCO's General Conference at our Organization's Headquarters in Paris. This was one of the first major international events that took place after the tragic events of 11 September 2001. About half a dozen Heads of State and more than two hundred Ministers addressed the Conference. In all of their addresses there was one theme that was a strikingly common feature. And that feature was the importance of EDUCATION. They all stressed that education is undoubtedly the key to overcoming the disenchantment of excluded people and the means of empowering individuals to be responsible citizens. Education is the avenue through which both young people and adults can channel their energies and emotions towards peaceful and constructive livelihoods that contribute to sustainable development. In other words, education should be the cornerstone of human capacity building and human resource development if we are to create a more harmonious world for all its citizens.

Some of you may know that UNESCO has launched a global programme of Education for All. One of the goals of this programme is to achieve a 50% reduction in the number of illiterate people in the world by the year 2015 and to lead them into the technology-dependent, knowledge-based society of the twenty-first century. However, UNESCO is well aware that teaching these people to simply read and write is not sufficient. They must be empowered to engage in the world of work and to take control of their lives. UNESCO believes that basic education must deliver a holistic package that equips individuals with the competencies and skills to develop their personality and to interact with their community in a productive and fulfilling way. This means that basic education must impart knowledge, social skills and work skills.

Two and a half years ago, UNESCO and KRIVET jointly held the Second International Congress in Technical and Vocational Education in this very City. That event was a major milestone in the evolution of technical and vocational education and training or TVET. The Seoul Congress, as it is now widely known, generated the concept of TVET for All throughout life as the answer to some of the problems facing both developed and developing countries. In other words, technical and vocational education and training must constitute a pivotal element in national strategies for human resource development in developed and developing countries as well as in countries in transition.

The Seoul Congress clearly demonstrated that TVET has a crucial role to play in preparing both young people and adults for work and a fulfilling life. It must contribute to poverty alleviation, sustainable socio-economic development and social cohesion and integration. The Seoul Congress also reminded us that in this era of globalization the world of work is becoming increasingly knowledge-based and technology-driven. One is expected to update one's knowledge and skills for work continuously.

The recommendations of the Seoul Congress have been integrated in UNESCO's normative instrument or standard-setting document on technical and vocational education. This document which is called the Revised Recommendation concerning Technical and Vocational Education was first adopted in 1962. It was revised in 1974 and then after the Seoul Congress in 1999 has been revised again taking into consideration the recommendations formulated at the Congress on how the field of TVET should adapt to the global situation in the early years of the twenty-first century. This new version of the standard-setting document has just been approved and adopted by the UNESCO General Conference at its 31st session in October 2001. The Revised Recommendation concerning Technical and Vocational Education is therefore an extremely valuable document for Member States both developed and developing as it describes internationally acknowledged standards and norms in the field of TVE that countries should achieve and maintain. I am also happy to announce to you that UNESCO and ILO will very soon be publishing the two Organizations' standard-setting documents in one volume. This means that both the education and the training aspects of TVET will be dealt with in one publication.

In developed countries, there has been a change in the work content of most occupations and we learn that wage employment opportunities in the industrial sector are diminishing. Many low- to medium-technology industries are relocating in developing countries to benefit from cheaper labour and tax concessions. Furthermore, the combination of globalization and technological developments has enabled highly skilled workers in developing countries to provide services for developed countries while living in their native lands. Examples that come readily to mind are the telecommunications and the computer software industries.

It is therefore obvious that we should not regard the jobs in a country as a static mass. On the contrary, the available employment is in a constant state of flux. Jobs based on older technologies are lost while new technologies create new jobs. It is thus clear that developed countries are compelled to innovate and develop newer technologies and services in order to retain the strength of their economies and employment for their workforces. This also means that human resource development strategies must take into account the need to constantly train and re-train their workforces so that they may effectively engage themselves in the emerging technologies. It is only education that can prepare people for the new jobs that are created. And in order to prepare workforces with the appropriate skills, TVET systems must adapt to the new changes in economy and society. These changes include globalization, an ever-changing technological scenario, the revolution in information and communications, and the consequent rapid pace of social change. The implications of these transformations include the increased mobility of labour and capital, uneven impacts upon rich and poor, and emerging market economies in both rural and industrial sectors. The knowledge-based society, which these changes are bringing, offers exciting new opportunities for those who are equipped to engage in it. On the other hand, it can only bring a cycle of exclusion, deprivation and despair for those who are not so equipped. So the signs are clear. National education policy planners must recognise that TVET is for personal, social and economic benefit. Therefore they must provide TVET systems that utilize up-to-date technology and highly skilled teachers and trainers.

For developing countries, the challenge is to compete for the opportunities presented by globalization and the information and communication technology. The increased mobility of capital and technology implies that countries possessing the most skilled workforces will be selected as the locations for new industries. The key to attracting these new industries will then be to prepare workforces with the knowledge, skills and attitudes to successfully absorb new technologies.

Developing countries must therefore adopt human resource development strategies that prepare competitive, flexible and innovative workforces. Developing such a workforce also means that the strategy must include nutrition and health as essential underpinnings.

In many developing countries the informal economy is as large as the formal economy. This trend is expected to continue as there are likely to be more opportunities in self-employment than in wage-employment. National strategies must therefore encourage distance and flexible learning, recognition of non-formal learning, ethical entrepreneurship, the necessity for product and service quality standards and affiliation to professional associations.

UNESCO believes that regional cooperation is an effective modality for fostering and promoting sound TVET policy and practice in developing countries. With a view to promoting cooperation in the Asia-Pacific Region UNESCO designated KRIVET as a Regional Centre of Excellence in TVET just over one year ago. As an outstanding institution of TVET research and training, KRIVET plays a leadership role in the Asia-Pacific Region and helps developing countries in the Region to strengthen and improve their TVET. Many countries in the Asia-Pacific Region, and even some outside it, wish to emulate the economic success that the Republic of Korea has achieved over the last four decades or so. These countries are aware that Korea's success has resulted in large part from very focused education policies that have given priority to the development of technical skills. It is therefore logical that these developing countries wish to benefit from Korea's experience in TVET through cooperation with its pre-eminent TVET institution.

For countries in transition towards a market economy, the task of adapting to the globalized economy is not an easy one. Greater productivity and updated skills are required. People accustomed to paid employment for life now find that jobs are scarce. These countries need to prepare their workforces for a range of work options. Workers need to accept that they may have to change jobs several times during their working lives, perhaps undertake more than one job simultaneously and even become self-employed. Indeed, small businesses are expected to generate the greatest number of jobs in countries in transition. Therefore an increasingly vital role in economic development is foreseen for them. Self-employment is now becoming an accepted feature of these economies and offers the highest potential for economic independence for most young people.

Most developing countries and those in transition face special challenges in improving their TVE systems. The cost of introducing new equipment and re-training the teaching staff is very high. Therefore national strategies for human resource development must foresee multi-faceted systems that involve joint responsibility from government, employers from both the public and private sectors, and the community. At present, the public sector is still the major provider of formal TVET in most countries. But in order to develop a vigorous and labour market oriented system, prospective employers need to assume increasingly critical roles in planning and implementing TVET programmes. They need to equip training facilities for students and teachers, and provide clear projections regarding the evolving needs of the workplace. Both government and employers must recognize that investment in TVE brings significant returns including enhanced productivity, international competitiveness and the well-being of workers. Thus TVET should be seen as a good investment, and not as a cost.

In framing national strategies for human resource development it is of utmost importance to keep in mind the enormous potential of rural communities. TVE can help these communities to update their traditional skills, add value to their products and set up small businesses. Information and communication technology can be used to promote TVE and to introduce new technologies in remote rural communities. The promotion of agriculture-based industries will help to the rural youth in their communities.

In summary, I would like to stress that in national strategies for human resources development there are certain common principles that need to be observed whatever the state of development of that country. First, we cannot be complacent about the employment situation remaining constant. Old jobs will disappear while new ones will be generated.

Second, young people need to be trained for the newly emerging professions while people already working may need re-training in order to stay employed. Third, Governments must encourage private sector innovation in product and service development so that the economy remains vibrant. Fourth, human resources are your most valuable asset and your success will depend on how well trained they are in marketable skills. Fifth, TVET is an investment that will enable you to innovate and maximally utilize your resources.

Finally, I would like to suggest that all UNESCO's Member States are most welcome to consult our Organization regarding strategies for human resource development.

UNESCO's programme in technical and vocational provides policy advice to Member States, assists in curriculum renewal and teacher training and also helps develop expertise in cross-cutting areas such as Entrepreneurship Training. Thus the conceptual and policy-oriented work is carried out by UNESCO Headquarters in Paris. The programme established in July 2000 an international training centre in Bonn, Germany. The Bonn Centre coordinates the UNESCO UNEVOC network that has a member institution in almost every country and also functions as an information clearinghouse. The institutions of the UNEVOC network are linked by e-mail for the purpose of exchanging information on all aspects of TVET including policy issues, curriculum, teacher training, information and communication technology (ICT), employment opportunities and even solving day-to-day TVET problems.

I shall conclude by wishing this conference every success. I am positive that there will be a valuable exchange of views that will inspire innovative ideas on national strategies for human resource development.

Ⅲ. 학교에서 직업세계로의 효과적인 진입

1. 주제 발표

- **School to Work Transition in Australia**

  …… *Ms. Katrina Ball*

- **Main Issues for Effective Transition System from Initial Education to Working Life in Korea**

  ……*Mr. Ho-jin Hwang*

2. 국가 사례 발표

- **School to Work Transition of the Graduates in the Trade Technical-Vocational Institutions in the Philippines** ……*Dr. Renato M. Sorolla*

- **Vocational and Technical Education and Training in Vietnam and Issues of School-to-Work Transition**

  ……*Dr. Hoang Ngoc Vinh*

3. 자유 토론

School to work transition in Australia

Katrina Ball
National Centre for Vocational Education Research

The paper provides an overview of the main education and training pathways available to young people in Australia to assist the transition from school to work. The effectiveness of the various pathways in providing secure employment to young people are examined within the context of changes that have occurred to the Australian youth labour market since 1990. Recent policy changes in education and training are discussed, including the recent advances to the teaching of vocational subjects in Australian schools. The reintroduction of vocational education and training into the secondary school curriculum has been the most significant contemporary development in attempting to strengthen the effective transition from school to work in Australia in recent times. Other changes have been the attempt to strengthen the link between the education sector and enterprises in areas where there has not been a tradition of this type of relationship. The emphasis since 1990 has been on providing multiple pathways for young people and the flexible delivery of education and training.

Finally, the policy challenges still remaining in Australia to improve school to work transition are discussed. These relate to policies to reduce the incidence of early school leaving or to provide alternative education and training options for those who leave school early and are at risk of not making an effective transition to the labour market.

Introduction

School to work transition for Australian students needs to be understood in terms of the Australian labour market, and the Australian school system. McKenzie (2000) argues that the pathways through education to work for young people in Australia are individually constructed rather than institutionally constructed. Nonetheless, students tend to follow a number of major pathways. These are apprenticeship or traineeship; full-time employment; part-time work and no study; part-time work and study; full-time study at a tertiary institution; unemployed or not in the labour force. The proportion of young people participating in these activities is presented in table 1. Only about 16 per cent of young people 15-19 years of age were employed full-time in May 2001. A third of the age group were at school without any employment, while a further 17 per cent were at school with some part-time work. About 18 per cent were in tertiary education (university or VET) and about half of this group had some part-time work. Over half of all young people 20-24 years of age were in full-time employment, while 21 per cent were attending a tertiary institution.

〈Table 1〉 Labour force status of Australian 15-24 year olds, May 2001

		15-19 year olds			20-24 year olds		
		Males	Females	All persons	Males	Females	All persons
Unemployed	Non-student	5.7	3.7	4.7	8.6	6.5	7.5
	School Student	3.8	4.8	4.3	0.0	0.0	0.0
	Tertiary Student -VET or university	1.5	1.8	1.7	1.7	1.6	1.6
Employed	Full-time	19.8	12.5	16.2	58.0	46.5	52.3
	Part-time Non-student	6.0	7.3	6.6	7.8	13.5	10.6
	Part-time School student	15.2	19.3	17.2	0.0	0.0	0.0
	Part-time Tertiary student -VET or university	7.5	11.1	9.2	8.9	11.6	10.2
Not in the labour force	Non-student	3.2	4.3	3.7	5.0	12.0	8.4
	School Student	30.7	27.7	29.2	0.0	0.0	0.0
	Tertiary Student VET or university	6.6	7.6	7.1	10.1	8.3	9.2
Total		100.0	100.0	100.0	100.0	100.0	100.0

Source: ABS 'Labour Force' Catalogue 6203.0, May 2001

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Typically, school students attend a comprehensive secondary school and until recently there were few options available to young people staying on at school who did not wish to proceed to university. However, the Australian post-school education and training sector is diverse, with a wide range of institutions, programs, qualifications, and different enrolment and delivery options available to young people.

It is also important to note that increasingly the concept of a specific and measurable transition period where students are committed to preparing themselves for work is becoming less meaningful. Today school and work for many students co-exist and students often have casual and part-time jobs while they are still at school. About a third of all school students over 15 years of age had a part-time job in May 2000. Two-thirds of tertiary students are engaged in some form of employment (see table 2).

〈Table 2〉 Persons aged 15 to 64 in Australia - Educational attainment, May 2000

	Employment/ population ratio	Unemployment rate	Proportion of population
WITH POST-SCHOOL QUALIFICATIONS	81.3	4.4	44
Higher education	83.5	4.0	21
Higher degree	88.3	3.2	2
Postgraduate diploma	85.7	2.7	2
Bachelor degree	85.3	3.0	12
Undergraduate diploma	76.8	4.9	5
Vocational education and training (VET)	79.4	5.0	23
Associate diploma	80.8	5.2	3
Skilled vocational qualification	83.1	4.1	12
Basic vocational qualification	73.7	7.2	8
WITHOUT POST-SCHOOL QUALIFICATIONS	63.6	8.6	51
Completed highest level of school	70.1	7.2	19
Attending tertiary in May 2000	62.4	8.8	5
Not attending tertiary in May 2000	73.2	6.7	13
Did not complete highest level of school	59.9	9.5	32
Attending tertiary in May 2000	65.7	11.2	2
Not attending tertiary in May 2000	59.5	9.3	30
Still at school	33.5	18.3	5
Total	69.7	6.8	100
Total number ('000s)			12,652.7

Source: Unpublished ABS data from the Transition from education to work survey, May 2000

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The Changing needs of the labour market.

Increasingly, post-school qualifications are needed to succeed in the Australian labour market. In May 2000, over 80 per cent of all people aged 15-64 in the Australian workforce with post-school qualifications were in employment. By contrast, only 64 per cent of people without post-school qualifications were in some form of employment. The unemployment rate for people without a post-school qualification was almost nine per cent in May 2000. This contrasts with an unemployment rate of around four per cent for people with a post-school qualification. The completion of the highest level of secondary school is no longer sufficient to ensure lifetime success in the labour market. In May 2000, about seven per cent of those people who had completed senior secondary school but had no post-school qualification were unemployed.

The type of qualification attained influences the likelihood of employment. About three-quarters of all people aged 15-64 with a basic vocational qualification were employed compared with 85 per cent of people who held a bachelors degree. The type of qualification required varies between industry and employment. The proportion of people employed in each industry and occupation in Australia by qualification is shown in tables A1 and A2 respectively in the appendix. Almost 90 per cent of professionals hold a post-school qualification in contrast to 22 per cent of people employed in elementary clerical, sales and service or labouring occupations.

A changing labour market for young people

There have been major changes to the Australian teenage labour market over the last two decades. At the start of the 1980s, almost four out of every five teenagers who were in employment, were employed full time. Today (2001), less than a third of teenagers in employment are employed full time. While the full time unemployment rate (number unemployed and looking for full time work as a proportion of the age cohort in the labour force) has remained over 20 per cent since 1990, the proportion of the age cohort who were unemployed and looking for full time work has been relatively stable since 1980 and is currently around 5 per cent, having steadily declined since 1992.

In contrast to the situation for teenagers, there has been little change in the labour force participation rate of young adults aged 20-24 years over the last two decades. However, there has been a dramatic change in the composition of employment as the proportion employed part time relative to full time increased over the two decades. In 1980, almost 90 per cent of young adults who were employed, were employed full time compared with 70 per cent in 1991. Unlike the situation facing teenagers looking for full time work, the full time unemployment rate for 20 to 24 year olds is currently around 12 per cent, having declined from about 18 per cent in 1992 to 10 per cent in 2000. The proportion of the age cohort, who were unemployed and looking for full time work has ranged between 6 and 12 per cent over the last two decades and is currently around 7 per cent.

School to work transitions

Increasingly, young people are remaining on at school to complete the highest level of schooling before progressing to further education and training either at a university or a vocational education and training provider, or entering the labour market. In Australia, there is a strong focus on general education at school and most people acquire their vocational skills on-the-job. The labour market is relatively open and flexible with little government intervention (McKenzie, 2000).

School to university

The number of students studying at higher education institutions in Australia has grown by 58 per cent from 1989 to 2000, reaching almost 700, 000 students by 2000. The growth for people under 25 years of age has been around

54 per cent from 1989 to 2000, with a total of 423,000 students in this age group in 2000. Over a quarter (26 per cent) of all 18 and 19 year olds and 14 per cent of 20 to 24 year olds in Australia are enrolled in a higher education institution (derived from DETYA 2000).

Almost three-quarters of all higher education students are enrolled in a bachelor degree course and these courses tend to be predominantly in a narrow range of fields of study. Around seven in ten students were undertaking courses in four fields of study (arts, humanities and social science, business, administration and economics; health and science) in 2000.

Student outcomes from university

About 84 per cent of all Bachelor degree graduates were employed within six months of completing their course in 2000, with humanities graduates reporting the lowest full-time employment outcomes. Around one in four graduates continued in full time study with the highest proportion of graduates enrolled in science (39 per cent of science graduates) and humanities (36 per cent of humanities graduates) fields of study.

School to VET

The number of students/trainees in publicly-funded VET programs in Australia has grown very strongly over the past decade. Ten years ago, under one million people participated in VET in Australia. Today, over 1.5 million people are undertaking a publicly-funded VET program. This represents over 12% of the entire population aged 15 to 64 years (ie. the working age population).

This level of participation has resulted in Australian participation rates in VET being high. However, most VET participants are adults who are training or re-training for job related purposes. One quarter of all VET participants in Australia are over 40 years of age. In fact, in Australia a VET student/trainee is far more likely to be an adult who is already employed and upgrading his or her job skills, than a young person who is studying in VET to gain an entry-level vocational qualification. The proportion of Australia's VET students/trainees who are school age students, early secondary school leavers or entry level trainees is relatively small. Only 20% of all VET students/trainees are under 20 years of age, although they account for one-third of the total training hours delivered. The proportion of female students/trainees in VET in Australia has now almost reached 50%.

However, the vocational education and training sector is an important education and training destination for young people. In terms of the different age groups, VET participation rates in 1999 were:

- 26 % for 15-19 year olds
- 19% for 20-24 year olds
- 9% for 25-64 year olds.

Student outcomes from VET

After study, graduates from vocational education and training institutes can either enter the workforce or continue with their studies to obtain a higher-level qualification. In 2000, almost 90 per cent of graduates achieved an employment or further study outcome, although males (92 per cent) are more likely than females (87 per cent) to achieve employment or progress to further study. There are no significant differences in outcomes across age groups.

Apprenticeships and traineeships

A very significant feature of Australia's VET system is the apprenticeship and traineeship system, also referred to as the New Apprenticeships System. The system has grown considerably in recent years. The proportion of all 15 to 19 year olds in an apprenticeship or traineeship has risen from 5.7 per cent to 7.5 per cent between 1995 to 2000.

The participation rate of young adults aged 20 to 24 years of age has grown even faster, from 3.7% in 1995 to 6.3% in 2000. An important development in the apprenticeship system has been the removal of any age barriers to participation in apprenticeships and traineeships over the last decade or so. Today less than 30% of apprentices/trainees are under 20 years of age. Around one-third are more than 25 years of age, as shown in Table 3.

Three-quarters of all new apprenticeships are at Certificate III level. Younger apprentices aged 15-19 years of age are more likely to be in an apprenticeship at certificate level II level and in a trade apprenticeship than older apprentices.

〈Table 3〉 Characteristics of apprentices and trainees in Australia: 1999

Age Group	Number in training[a] Contracts ('000)			Proportion of age cohort(%)		
	Males	Females	Persons	Males	Females	Persons
15-19 years	53.5	21.6	75.1	7.8	3.3	5.6
20-24 years	73.6	23.9	97.5	10.6	3.6	7.2
25-39 years	35.0	20.1	55.1	1.6	0.9	1.3
40-64 years	16.5	15.6	32.0	0.6	0.6	0.6
TOTAL 15-64 years	178.5	81.2	259.7	2.8	1.3	2.0

Note: (a) Number in training as at 31 Dec 1999

Sources: NCVER data as at March 2000

The other important issue with the development of Australia's apprenticeship and traineeship system is the shift that has occurred in the type of occupations that apprentices and trainees are engaged in, particularly in the last decade. Some of the traditional trades areas in the metal trades, manufacturing, building and electrical areas, have declined in relative importance. The shifts in the patterns of apprenticeship/traineeship training have in large part followed changes in the occupational structure of the Australian labour market as a whole. Flexible, rather than fixed amounts of on-the-job and off-the-job training can now be provided according to employer and trainee requirements.

Although New Apprenticeships are an important part of the Australian vocational education and training system, the importance of this mode of training should not be overstated. For example, in recent years the number of Australians involved in an apprenticeship or traineeship in a year is only about 20% of the number who undertake vocational education and training with providers in receipt of public funds.

Outcomes for apprentices and trainees

New apprenticeships are an excellent pathway to jobs, irrespective of the age of the person completing the apprenticeship or traineeship. Some 90 per cent of new apprentices aged 15 to 19 years are retained in employment or have gained new employment within 3 months of completing their apprenticeship. This employment rate rises to 92 per cent for young adults aged 20 to 24 years of age and is slightly higher for adult completers aged 25 years and over.

School to work

As discussed, labour market demands have encouraged students to remain at school for longer periods. There has been a gradual increase in school retention rates in Australia for years 10, 11 and 12 since the mid 1960s when less than a quarter of all school students remained at school to complete year 12. At the start of the 1980s, just over a third of students completed senior secondary school. In contrast, now (2000), only about 2 per cent of all school students do not remain at school to complete year 10; 15 per cent do not complete year 11 and just over a quarter do not complete year 12 (see table 4). In addition, many of those who do not remain at school to complete year 12 are engaged in other forms of education and training. It is estimated that about 13 per cent of students do not complete year 12 or engage in some other form of education and training (Ball and Lamb [in press]).

〈Table 4〉 Apparent retention rates of students to years 10, 11 and 12

Year of education	1967	1970	1973	1976	1979	1982	1985	1988	1991	1994	1997	2000
Year 10	88.3	95.2	95.6	97.9	94.8	98.8	98.8	99.1	98.8	96.7	97.2	97.6
Year 11	36.1	43.9	48.4	52	53	57.4	66.7	71	86	85.3	84.4	85.3
Year 12	22.7	29.3	33.1	34.9	34.7	36.3	46.4	57.6	71.3	74.6	71.8	72.3

Source:ABS Schools Australia Catalogue 4221.0 (1997, 1994, 2000); DEET (1991)

These developments have made it necessary for school systems to broaden the curriculum options for school students and especially for those seeking to enter university on school completion.

The enhanced school vocational education and training curriculum

The school-based vocational education and training curriculum of the early 1990s was focussed on students who were university-bound. The curriculum was not focussed on the needs of employers or industry and was not providing students with the work experience or skills that would secure them a place in the workforce direct from school. In addition the curriculum was not proving students the opportunity for seamless entry to the post-school vocational education and training system. With the exception of students who were able to secure an apprenticeship on leaving school few students who had studied a vocational education and technology curriculum at school continued with formal education after school.

VET-in-schools programs were introduced in the mid-1990s in response to the need to provide a meaningful pathway for those students who were not university bound and still at school. Comprising a variety of offerings these programs were focussed on providing students with opportunities to acquire industry-specific and nationally recognised qualifications, and work or occupationally specific skills in their final years of schooling.

Today VET-in-schools programs comprise a comprehensive array of VET offerings with secondary schools, within and between State jurisdictions, responding to the needs of their students in ways that take advantage of the schools' particular geographical, labour market and industry environments. However, just five industry areas tend to account for about 80% of all enrolments. These are business and clerical, general education and training, tourism and hospitality, computing, engineering and mining. In addition there are also substantial numbers of students involved in industry specific programs like building and construction, community services and health, and automotive.

In addition, to completing subjects for their senior secondary school certificate secondary school students may undertake Vet subjects which are 'embedded' into the existing school curriculum, or offered as stand alone programs. Stand alone programs provide opportunities for students to complete qualifications, generally at the certificate I, II or III levels. These programs can be delivered by a TAFE or other non-school Registered Training Organisation or by the school itself if it is registered to provide those programs. They are also able to undertake school-based part-time apprenticeships and traineeships. However, the majority of students are engaged in 'embedded VET' programs. Details on the proportion of students participating in Vet programs at school are provided in table 5. Participation rates and courses vary across state and territory jurisdictions.

〈Table 5〉 **Students in VET-in-Schools programs undertaking vocational education within their senior secondary certificate provided at a school, 1999**

State/Territory	Students undertaking VET within a senior secondary certificate at school		Total Year 11 and 12 students		Students in VET-in-Schools programs as a proportion of total Year 11 and 12 in each jurisdiction
	No ('000)	Proportion of Australian total (%)	No ('000)	Proportion of Australian total (%)	(%)
Queensland	41.1	36.2	83.3	20.7	49.3
New South Wales(a)	23.0	20.2	123.1	30.6	18.7
Victoria	13.6	12.0	100.6	25.0	13.5
Western Australia	8.8	7.7	42.3	10.5	20.8
South Australia	18.5	16.3	30.4	7.6	60.9
Tasmania	2.6	2.3	10.5	2.6	24.8
Northern Territory	1.5	1.3	2.8	0.7	53.6
Australian Capital Territory	4.5	4.0	9.4	2.3	47.9
Australia	113.6	100.0	402.4	100.0	28.2

(a) Excludes secondary students enrolled at TAFE in the NSW Joint Schools TAFE initiative who do senior secondary education and some VET subjects all in TAFE which are another 22 800 students

Source: MCEETYA (2000); ABS 'Labour Force' Catalogue 6203.0 (2000)

Part-time school apprenticeships and traineeships

Part-time school-based apprenticeships and traineeships in which students are engaged in paid work, allow students to complete or partially complete a nationally recognised VET qualification and their senior secondary school certificate while they are still at school. By June 2000 there were around 6 200 school-based apprenticeships and traineeships in Australia as a whole. The State of Queensland is leading the way nationally with almost 54% of all school-based apprenticeships and traineeships in Australia. These details are provided in table 6.

Students in school-based part-time apprenticeships and traineeships are employed either directly by an employer, or by a group training company. Where there is direct employment by an employer the employer is responsible for all the costs associated with the trainee (for example, trainee wages, holiday pay, sick pay, superannuation etc.) Where employment is with a group training company the group training company takes care of all employment-related costs, and hires the trainee out to host employers for a fee.

〈Table 6〉 The number of school-based apprenticeships and traineeships, 1996-2000

Year at 30 June	No. in training		Queensland as a proportion of all school-based apprenticeships in Australia (%)
	Queensland	Australia	
1996	3	222	1.3
1997	16	336	4.8
1998	344	1181	29.1
1999	1696	3342	50.7
2000	3269	6119	53.4

Source: NCVER unpublished data

Outcomes for students in VET-in-schools programs

As the growth in the number of students involved in VET-in schools programs nationally has only occurred in the last few years it is still too early to conduct meaningful national longitudinal studies on the further education and training and labour market destinations of students who have taken these programs. However, some initial evaluations have been undertaken of the programs by state jurisdictions who were early to introduce the programs into their states' curriculum and by the Education and Career Education Foundation (ECEF) who sponsored some of the programs.

Polesel et al (1999) report on the destinations of 1997 year 12 students in their second year out of school who studied VET in schools programs in Victoria. More than half of the students who took these programs were still studying, including those in apprenticeships and one in five were in full-time work.

Misko and Slack (2001) report on a national school leaver destination study of students who had participated in structured workplace learning programs supported by the Enterprise and Career Education Foundation. The sample represented about 15 per cent of 1999 school leavers who participated in structured workplace learning and reports on the initial post-school destinations of survey respondents.

The results of the survey for those students who completed year 12 and participated in a structured workplace learning program suggest that about two in five students were in full time work; one in ten students were in part-time work; just over a third were in full time study and less than one in ten (7.5 per cent) were unemployed. However, there were differences in post-school outcomes depending on the particular vocational course studied at school.

Early school leavers

Despite attempts to provide meaningful pathways for all students a minority of students still fail to complete their senior secondary schooling. While some of these students will gain an apprenticeship or successfully enter the labour market, a group of early school leavers will fail to successfully make the transition to work. An important policy objective of governments in recent years has been to improve the transition from school to working life for young people. It has led to particular concern over the group of young people who fail to complete school. It is widely recognised that early school leavers experience the most difficulty in making the transition from school to productive activities in adulthood post-school education, training and employment.

Studies of early school leavers have reported that they are predominantly from low socio-economic backgrounds and from rural and remote areas of Australia (Dwyer 1996; Ball and Lamb, in press). They are also more often males than females, from government rather than private schools, and with much higher rates among indigenous than non-indigenous students.

A key response by government has been to strengthen the range of education and training options available to early leavers, particularly through the expansion of vocational education and training. In addition there have been changes to incentives to participate through changes to income support arrangements for those in education and training and for those out of work.

A recent Commonwealth Youth Pathways Action Plan Taskforce developed a framework for a Youth Transition System that would provide all young people with access to professional and appropriate career and transition support and information. Trials have been put in place to model new ways to provide innovative and collaborative youth services across a range of service providers.

Conclusions

There has been a demise in the youth labour market over the last decade. These changes have been accompanied by increased demands by employers for workers with post-school qualifications. Completion of a general senior secondary school education will no longer guarantee employment for young people.

In response to these changes, there has been a shift towards school curriculum which is focussed on better preparing non university-bound students for the workplace. To date, these initiatives have led to successful outcomes for a broad range of students.

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Appendix

〈Table A1〉 Australian qualification profile by industry sector, 15-64 years, May 2000

	With post-school quals	Higher ed	Higher Degree	Postgrad diploma	Bachelor degree	Undergrad Diploma	VET	Associate diploma	Skilled vocational quals	Basic vocational quals	Without post-school quals	Completed highest level of school	Did not complete highest level of school	Total
Agriculture, Forestry and Fishing	34	10	0	0	6	4	14	2	11	11	66	15	51	100
Mining	59	21	3	2	12	5	35	3	29	6	41	11	30	100
Manufacturing	50	16	1	1	10	4	28	3	22	8	50	16	34	100
Electricity, Gas and Water Supply	63	22	4	3	12	3	40	7	27	8	37	13	24	100
Construction	55	7	0	0	4	2	44	3	37	7	45	14	31	100
Wholesale Trade	43	15	1	1	9	5	21	3	15	10	57	23	35	100
Retail Trade	30	9	0	1	5	3	17	2	13	7	70	26	44	100
Accommodation, Cafes and Restaurants	34	11	0	1	6	4	15	2	11	10	66	29	36	100
Transport and Storage	42	14	1	1	7	5	22	3	16	9	58	20	38	100
Communication Services	47	21	4	2	11	4	25	6	13	7	53	24	29	100
Finance and Insurance Services	48	31	3	3	22	3	11	4	3	10	52	31	21	100
Property and Business Services	62	39	4	3	26	7	18	5	8	9	38	19	19	100
Government Administration and Defence	63	39	4	5	23	6	19	6	8	10	37	17	21	100
Education	80	68	10	13	35	10	9	3	3	6	20	9	11	100
Health and Community Services	70	49	5	5	24	15	14	4	5	12	30	11	19	100
Cultural and Recreational Services	49	29	3	3	18	5	15	4	7	9	51	25	26	100
Personal and Other Services	51	18	2	2	8	7	27	4	19	10	49	20	29	100
TOTAL	51	25	3	3	14	6	21	4	14	9	49	19	30	100

Source: Unpublished ABS statistics from the Transition from education to work survey, May 2000

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〈Table A2〉 Australian qualification profile by industry sector, 15-64 years, May 2000

	With post-school quals	Higher ed	Higher Degree	Postgrad diploma	Bachelor degree	Undergrad Diploma	VET	Associate diploma	Basic vocational quals	Without post-school quals	Completed highest level of school	Did not complete highest level of school	Total
Managers & Administrators	60	34	4	3	20	7	23	5	7	40	15	26	100
Professionals	87	77	10	9	46	13	11	4	3	13	9	4	100
Associate Professionals	57	26	2	3	14	8	28	7	10	43	21	22	100
Tradespersons & Related Workers	65	4	0	0	2	2	56	2	7	35	11	24	100
Advanced Clerical & Service Workers	46	16	1	2	7	6	10	4	23	54	22	32	100
Intermediate Clerical, Sales & Service Workers	41	14	1	1	7	5	15	4	16	59	28	31	100
Intermediate Production & Transport Workers	27	5	0	0	3	2	17	2	7	73	20	53	100
Elementary Clerical, Sales & Service Workers	22	9	1	1	4	3	8	2	7	78	29	48	100
Labourers & Related Workers	22	5	0	0	3	1	12	1	7	78	20	58	100
TOTAL	51	25	3	3	14	6	21	4	9	49	19	30	100

Source: Unpublished ABS statistics from the Transition from education to work survey, May 2000

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Main Issues for Effective Transition System from Initial Education to Working Life in Korea

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Abstract

The issues of effective transition from initial education to working life have been derived from youth unemployment since 1970s in European countries, but were raised only recently in Korea. Korea now faces high youth unemployment rate, especially for recent graduates. Youth employment rate has been dropping due to the slowdown of youth recruitment by firms. Enterprises prefer experienced labor and it appears to be more difficult to create more posts for youth in the near future.

Korea is one of the countries that show the longest transition length of 9.3 years. Korea shows longer period in education pathways and in what happens after they leave initial education, the latter being the main cause for the joblessness of youth labor force.

The transition outcomes in Korea doesn't appear to be favorable. The employment rate is low, and nearly one third of the employed complain about job mismatch in contents and level. These trends are more apparent for college and university graduates.

This paper reviews the key ingredients for an effective transition system and tries to adapt them to Korean context in order to improve the transition

outcomes. Open and flexible pathways, sufficient information and guidance, close collaboration between schools and firms, solid institutional framework and social commitment for the transition of youth are raised to be the main driving forces behind successful transition outcomes.

It is clear that considerable caution should be attached to implications of the key factors reviewed, especially when trying to develop new transition systems or transplant them to another country. Successful transition system in one country may not work in another, depending on the context of national cultures, traditions and institutions. Therefore, we must pay special attention to the contextual differences among countries.

1. Introduction

It is only recently that Korea concerns itself with and makes efforts for a successful transition from initial education to working life. Because there was an abundant supply of medium-skilled labor forces throughout the industrialization era, no special attention was paid to human resources development or the transition issue.

Youth unemployment had not been such a big issue in Korea before the economic crisis of 1997. Although the youth unemployment rate has been twice the overall unemployment rate and discontent has been raised from time to time with the contents and methods in vocational education, there were no special policy initiatives to address such problems. The high unemployment rate and frequent movements between jobs were perceived as a necessary process to find a better match. Hence, there were neither any systematic research nor policy development on this issue.

Recently, however, we have realized that it is more than a matter of economic cycles or frictional unemployment and that it can not be resolved through economic growth. While the advent of the knowledge economy is bringing about fundamental changes in the labor market and employment structures, the youth unemployment rate is increasing despite the up-leveling of schooling. Furthermore, young people with low-skills and less education face the most risk and instability in the transition process.

There are many types of transition that young people must make, such as the establishment of family as well as transition to working life. While the transition from initial education to working life is recognized only as the first of many transitions between work and learning, the success of this first transition is most important for career formation of individuals. Poor transition bears problems both in the career development of the individual youth and in human resources management of the whole society.

The transition from initial education to working life, as defined by OECD, starts at the end of compulsory education. Since upper secondary education is universal in Korea, however, we will focus on the preparation for work in upper secondary schools, the transition process to working post and finally, the outcomes of such transition. Moreover, upper secondary school is the most critical phase for all the pathways in any country. At the same time, we will review the preparation process in colleges and universities and the transition process to work.

The transition from initial education to working life is affected by differences in social, educational and cultural characters among countries. Therefore, it is necessary to develop a transition system that is effective in the context of each country's social and cultural conditions, education and training system, labor market and relationship between schools and firms.

2. The current situation of youth labor market

High level of national wealth or its increasing trend is the most fundamental factor for successful transition outcomes. Where national wealth is high or rising and overall unemployment is low, young people may have an easier time finding jobs. In such circumstances, there is a smaller need for expenditure on remedial labor market programmes and the same resources can be shared for effective mainstream education and for preventive programmes.

However, economies in which productivity rises through more investment in new technologies or more effective management and organization are more likely to eliminate jobs for the less skilled, and instead, to create more skilled or knowledge-intensive work.

〈Table 1〉 Unemployment rate of youth by age groups

Classification		1997(%)		1998(%)		1999(%)		2000(%)	
		Unemploy-ment rate	Proportion	Unemploy-ment rate	Proportion	Unemploy-ment rate	Proportion	Unemploy-ment rate	Proportion
Age Group	15-19	9.9	7.6	20.8	5.9	19.8	6.3	13.6	6.9
	20-24	7.2	26.8	14.8	17.7	12.8	16.0	9.3	17.3
	25-29	4.1	22.0	9.3	18.4	8.6	17.5	5.7	17.9
	30-39	1.9	20.6	5.7	24.6	5.3	24.2	3.4	23.0
	40-49	1.5	13.1	5.5	19.2	5.2	20.4	3.3	21.0
	50-59	1.2	7.1	5.2	11.1	5.2	12.0	2.9	10.7
	60-	0.8	2.7	2.4	3.2	2.4	3.6	1.3	3.3
Youth(15-29)		5.7	56.4	12.2	41.9	11.0	39.8	7.7	42.1
Total		2.6	100.0	6.8	100.0	6.3	100.0	4.1	100.0

Source : Office of Statistics, Korea

The unemployment rate of the youth between the ages of 15 and 29 in 1997 was 5.7% and increased to 12.2% in 1998 due to the economic crisis. Although the youth unemployment rate decreased with the help of rapid economic recovery in 1999, the impact of the recovery was not enough to turn it back to the earlier level. Accordingly, the ratio of unemployed youth relative to all unemployed persons increased from 39.8% in 1999 to 42.1% in 2000. This contrasts the significant reduction in youth to adult unemployment ratios in other OECD countries where the unemployment rate of youth to adult has substantially declined since 1970s.

〈Table 2〉 Employment & Unemployment rate of Youth

	Korea	US	UK	France	Germany	OECD Average
<Employment rate of Youth, %>						
Total	58.3	73.9	71.7	59.8	64.9	65.9
Youth(15~24 year olds)	28.6	59	60.8	20.8	46.8	46.7
Youth/Total	49.0	79.8	84.8	34.8	72.1	70.9
<Relative Unemployment rate of Youth, %>						
Total	4.1	4.3	6.1	11.8	8.7	6.4
Youth(15~24 year olds)	10.2	9.9	12.3	26.6	8.5	11.8
Youth/Total	251.8	230.2	201.6	225.4	97.7	184.4

Source : Office of Statistics, Korea, 2000; OECD(2000b); Korea in 2000, other countries in 1999

Korea's youth utilization rate is 28.6%, a figure remarkably lower than OECD countries other than France. Youth unemployment rate of OECD countries except Germany is above 10%, more than twice that of other age groups. It is notable that Korea shows the highest figure in this category.

〈Table 3〉 **Employment Rate by Age group and Education Level**

(Number; thousand, %)

			1997 (A)		1998		1999		2000 (B)		Change (A-B)
Age Group		15-19	382	-1.8	325	-1.6	346	-1.7	388	-1.8	5
		20-24	1,922	-9.1	1,484	-7.4	1,473	-7.3	1,507	-7.2	-416
		25-29	2,847	-13.5	2,612	-13.1	2,525	-12.4	2,616	-12.4	-232
		30-39	5,982	-28.3	5,918	-29.6	5,859	-28.9	5,794	-27.5	-188
		40-49	4,826	-22.9	4,800	-24	5,076	-25	5,517	-26.2	691
		50-59	3,152	-14.9	2,955	-14.8	2,987	-14.7	3,121	-14.8	-32
		60-	1,994	-9.4	1,900	-9.5	2,015	-9.9	2,120	-10.1	126
		계	21,106	-100	19,994	-100	20,281	-100	21,061	-100	-46
Education Level	Youth	Middle & below	375	-7.3	281	-6.4	282	-6.5	283	-6.3	-92
		High	3,322	-64.5	2,710	-61.3	2,599	-59.8	2,624	-58.2	-698
		College & above	1,455	-28.3	1,430	-32.3	1,462	-33.7	1,603	-35.5	148
		Total	5,152	-100	4,422	-100	4,344	-100	4,510	-100	-642
	Total	Middle & below	7,825	-37.1	6,698	-33.5	6,745	-33.3	6,904	-32.8	-921
		High	9,023	-42.8	8,598	-43	8,724	-43	9,099	-43.2	76
		College & above	4,258	-20.2	4,698	-23.5	4,812	-23.7	5,057	-24	799
		Total	21,106	-100	19,994	-100	20,281	-100	21,061	-100	-45

Source : Office of Statistics, Korea

The proportion of employed youth between the ages 15 and 29 to all employed decreased from 24.4% in 1997 to 21.4% in 2000 while the absolute number decreased by over 600,000. This trend is contrary to other OECD countries where the portion of young people neither in education nor in work has virtually diminished between the mid 1980s and the late 1990s.

The decrease in the number of employed youth was a direct result of decrease in total youth population. However, as the number of employed youth

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has decreased more than that of youth population, the ratio of employed youth among all youth population decreased greatly, from 45.1% in 1997 to 42.6% in 2000.

These figures demonstrate that the number of youth post decreased in absolute terms due to the slowdown of youth recruitment by firms. Enterprises prefer experienced labor and creation of additional posts for youth appears to be increasingly difficult in the near future. Recent recruitment trends have been of small scale and on-demand, rather than formal and massive.

The table above indicates that the number of employed decreased for youths with less than secondary education level, but increased for youths with education at colleges and beyond.

The unemployment rate of college graduates has been higher than that of upper secondary school graduates in Korea, contrary to other OECD countries. However, after the economic crisis in 1997, the unemployment rate of upper secondary school graduates increased remarkably relative to college graduates. There are two reasons behind this trend: first, the employment adjustment of low-skilled employees in marginal enterprises and secondly, the encroachment by college graduates on posts that had traditionally been recognized as posts for upper secondary school graduates.

As a result, the low-skilled workforce has come to face unstable employment, putting youths with upper secondary school graduates at the most unstable position in the employment structure.

The population of aged and middle-aged between 30 and 54 will increase sharply while the proportion of youth in ages 15 and above is expected to decrease from 44.8% in 1985 to 27.7% in 2005. As a result of the decline of population growth rate, such a change will cause workforce shortages in some industries, making it easier to enter higher schooling.

With the exception of some industries, most firms now prefer to hire youth of college or above level. Even when firms try to recruit the graduates of upper secondary education, they request the right attitude rather than excellent skills. Large firms or banks do not wish to employ upper secondary school graduates anymore, trying to substitute them with temporary or dispatched staffs.

The transition is influenced mainly by the labor market structures. Recent changes in industrial structures call for greater flexibility of employment, requiring that new graduates gain more information for their jobs and higher level of competences for successful transition. Meanwhile, firms are recruiting increasingly through informal routes where labor market information is imperfect.

Even after entering the working world, there is greater mobility in the workforce. The workforce of relatively low education level will face more unstable employment situation. Currently in Korea, the below 24 age group is receiving less wages than 25 and above age groups, showing that the first income level of the upper secondary education graduates has declined. Similar trend is observed in other OECD countries where young workers' earnings relative to older workers have declined during the 1990s.

3. The main patterns of the transition in Korea

〈Table 4〉 Rate of Entrance to Tertiary Education

Classification	Rate of Entrance to Higher Schooling		
	Total	General Pathway	Vocational Pathway
1990	33.2	47.2	8.3
1995	51.4	72.8	19.2
2000	68.0	83.9	42.0
2001	70.5	85.2	44.0

The rise in participation rate is a good indicator of successful transition. As opportunities for higher education greatly enlarged since the 1980s, entrance rate to higher education has gone up dramatically during the 1990s. The figure above shows that Korea's entrance rate to higher education is one of the highest among countries. Even the entrance rate of vocational high school is 44% in 2001, illustrating that vocational high school is no longer just a preparation process for working life but also a preparation for higher education.

The main factors that determine whether or not to move on to higher education are the types of upper secondary schools and school records rather than the income of the household. This implies that the family's socio-cultural background such as the parents' education level has the greatest effect on the decision. The strong desire for higher education can be explained by the social and cultural contexts such as marriage conditions rather than by its economic costs.

While entrance to higher education is mainly determined by school records, the entrance rate of a good achiever of vocational high school is about 50%. However, this trend for higher education of vocational high schools is not directed towards the further deepening of knowledge and skills achieved in upper secondary schools.

More than half of the employed who have completed upper secondary school have never prepared for their jobs. It means that they have made the transition from initial education to working life without any preparation. While 14.8% of general high school graduates have gotten their jobs after schooling, only 4% have actually prepared for the working world during the schooling. Even in vocational high schools, only half of the students are preparing for jobs.

In tertiary education, 36% of total students prepare for their entry to the working world. The middle-level achievers prepare the most for their jobs.

〈Transition process〉

Since Korean schools do not play a sufficient role in the transition process, a great number of students obtain the necessary information through informal routes. Schools play a much better role for the highly prepared students than for the poorly prepared students for their jobs.

The institutional network between schools and enterprises is not well established in Korea. Moreover, career guidance and counseling are not organized systematically to serve students effectively.

A large number of students start job-searching activities after leaving school. The duration for transition after leaving school is elongating as recent graduates flounder through temporary jobs, labor market programmes etc. A greater portion of students with tertiary education start their job search around graduation and over 70% of the graduates get their jobs after graduation.

〈Length of transition〉

The length of transition has generally risen during the 1990s as the average length rose by nearly 2 years from 1990 to 1996 in OECD countries.

The length of transition is defined as the period from after compulsory education to the entry point into labor market. This length is 9.3 years in Korea, 1.9 years longer than the OECD average of 7.2 years.

The length of transition consists of two parts: education pathways and the period after they leave initial education. Korea's schooling period is 6 years which is longer than the OECD average of 4.7 years. The period after leaving education in Korea is 3.3 years which is also longer than the OECD average of 2.7 years. Korea pertains to the longer period countries group. Such prolongation of non-schooling period seems to be the main cause for the joblessness of youth labor force.

As seen above, longer transition originates partly from the increase of proportions of young people who continue on to tertiary study, as more opportunities are given to vocational high school graduates as well as to general high school graduates. It was made possible by the increase of new non-university institutions and universities and the simultaneous decline of youth cohort.

In some cases, university graduates extend the duration of their schooling by completing tertiary courses at non-university level after receiving a degree. Nowadays, it takes young people more time to settle into work after leaving initial education due to the fundamental changes in economic conditions and tougher labor market circumstances in Korea.

Longer transition through the education pathway by the popularization of tertiary education is to be welcomed, but such a circumstances should be established so that vocational high school graduates can develop his career in the working life and continue his further education in the tertiary education institutions. And they can deepen his knowledge and skills through the development in the tertiary level.

It takes substantial time to settle into work after leaving their final school, and in Korea 29.4% of the secondary high school graduates who experience the period of unemployment spend that time for the Arbeit, 24.6% for the individual hobbey activities, and only 15.1% for the job preparation. This shows that the period of the unemployment is not utilized to develop their career competencies.

Longer transitions due to the combination of work and study can improve the conditions of labor market entry. On the other hand, long periods spent looking for work, in labor market programmes or out of either education or work are poor indicators of the transition outcomes, particularly if they occur during the immediate post-school period.

Much attention must be paid to early career instability. A sequence of part-time, temporary or poorly paid jobs, interspersed with periods of unemployment, participation in labor market programmes or inactivity is the obvious indicator for poor outcomes. The possibility to get a stable job becomes scarce for those with early unstable career experiences. The frequent mobility of a laborer is not a way to find relevant job match.

Those who are unemployed or those who are out of jobs, education or training fall in the category of "out-of-school joblessness." Youths comprise 20.9% of such out-of-school joblessness group in Korea, a level higher than 10.9% in the US, 12.5% in Germany, 18.3% in France.

One can lose opportunities to develop career competencies by joblessness, and joblessness can also undermine the current human capital. It would become a serious obstacle for the youth to be successfully integrated into the labor market.

〈Transition outcomes〉

One third of the employees say that their job post is lower than their level of education and that there is a job mismatch with his preparation in the schools colleges. These trends are more apparent for the college and university graduates.

Lots of employees of upper secondary education quit their jobs within a relatively short period due to lower-than-expected pay, poor working conditions and insufficient opportunities for further individual development. The resignation rate is higher for college graduates and the highest for university graduates.

Employers are most discontent with employees with tertiary education, followed by college graduates and then by vocational high school graduates. The ratio of the differences between the firms' needs and the education contents is 40% for universities, 32.2% for colleges and 25.4% for vocational high schools.

It is evident that transition outcomes are determined more by individual characters and labor market structures rather than school education and career experiences.

4. Main areas of the effective transition system

Recently many countries are making great efforts in order to deliver successful outcomes related to employment, social policies and programmes as well as the area of education. There are common basic goals for all transition policies. They are i) completion of full upper secondary education with recognized qualification for either work, tertiary study or both, ii) high levels of knowledge and skills at the end of the transition phase, iii) stable, positive employment and educational histories in the years after leaving upper secondary education, iv) equity by gender, social background and region, etc.

1) Flexible and clearly defined pathways

It doesn't appear that one type of pathway - whether apprenticeship, school-based vocational or general education - delivers the most successful transition outcomes. According to the results of related OECD project, however, solid transition outcomes are possible where young people have learning pathways and qualification frameworks that are clearly defined, well organized and open, designed and developed in a lifelong learning perspective, with effective connections to post school destinations, whether work or further study.

Countries in which the connections between pathways and their destinations are embedded in solid institutional frameworks are more likely to demonstrate successful initial transition outcomes.

These connections appear to be more important than the particular nature of the pathway itself.

Recently the patterns of participation in the pathways are changing and policy attention is being paid to creating more flexible pathways that allow young people to gain solid combinations of general and vocational education, and of education and workplace experience, as much within tertiary education as in secondary education. Young peoples' desire to delay preparation for working life in a rapidly changing labor market in which generic workplace skills is more emphasized.

Such attempts to increase general education contents of vocational pathways, and on the other hand, to increase vocational contents of general education pathways are being made in many countries.

Raising the amount and level of general education contents of vocational pathways in order to improve links to tertiary study can cause motivation problems among lower achievers because the newly added academic subjects would be demanding for some students in the vocational pathways.

Broadening the vocational contents of general education pathways may suffer from the lack of clarity regarding the purpose of such changes. It is not clear whether to provide full occupational qualifications, or to provide credit towards such qualifications, or to develop generic work skills, or to improve career awareness and decidedness. Consensus needs to be reached on that issue, considering the capabilities of teachers and facilities.

Young people want to be offered a wider range of choices with greater potential flexibility in movements between pathways to suit individual needs. A mix of pathways provides young people with a wide variety of general, technical and vocational education options to develop both work-related competencies and vocational interests and to prepare for tertiary education.

However, if the arrangement is to be effective, another measure of teachers and facilities is required. If teachers have only specialized expertise or if physical facilities have not been constructed to meet the needs of more broadly defined pathways, it may be difficult for a vocational school to make generic contents for a number of related occupations.

More links between vocational pathways and tertiary study are being made. The upper secondary school is to be changed to flexible and diverse system to ensure both employment and entrance to higher level education. Upper secondary school students tend to delay their final decision, calling for greater opportunities for diverse pathways.

The rate of participation in upper secondary vocational education pathways, particularly those not linked to tertiary study, has recently fallen in many countries. It is not easy to halt or reverse the falling status of upper secondary vocational education.

In Korea vocational high schools have now introduced classes to prepare for higher education, managed just like those in a comprehensive or integrated high school. This allows students to simultaneously prepare for jobs and for higher education in one institution.

Much effort is being made to provide institutionalized bridges between vocational high school and tertiary education in Korea. We are now using curriculum for vocational high schools which prepares the students for tertiary study as well as for employment. We have also planned to allow vocational school students to enter universities by providing extra places of 3% of the fixed entrance number from 2004. Introduction of vocational entrance examination for higher education is also under consideration. It is desirable, however, to further deepen the knowledge and skills achieved in upper secondary schools in higher education institutions.

Modular curriculum structures are becoming more common, allowing combination of different areas of study. However, modular curriculum structures might result in little real change in young people's actual choices and flexibility without significant changes in organizational factors such as school facilities and the school timetable. In some cases, they can run the risk of encouraging young people to leave education with only partial skills and qualifications

The vocational pathways should not be designed as a residual and dead-end pathway, linked to poor quality jobs and directed at the lowest achievers. Vocational education and training programmes for less successful young people should be designed as parts of safety nets rather than as ordinary vocational programmes.

2) Integrated information and guidance

Good information and guidance becomes increasingly important as the education and employment choices change and become more complex. The complexity arises from growing flexibility of the pathways as well as changes in jobs and career patterns. Such a change and complexity constitute strong grounds for the information and guidance to shift away from an approach that tries to provide the information on the jobs or programmes and towards an approach that places far more emphasis upon active career planning and personal and career development

However, information and guidance should not be expected to steer young people in particular directions to satisfy labor force planning requirements. Information and guidance alone cannot overcome a lack of equivalence between vocational and general education in current social and economic contexts, nor overturn deep-seated occupational hierarchies and gender differences in the labor market

A systematic approach to information and guidance during the transition phase is lacking in most countries. Too often information and guidance services are marginal within the priorities of schools, and this suggests a lack of policy coherence.

In Korea the main methods for getting information for jobs and securing jobs are through informal routes. Graduates of vocational high schools, colleges and universities complain about the amount and quality of the information supplied to them in the schools. About half of the graduates of upper secondary schools get their jobs through informal routes while 38.2% of the college graduates and 36.3% of the university graduates do so.

It is very difficult to expect substantial guidance or counseling for career planning or career development in Korea. The schools played almost no role in guidance of students after leaving schools.

We are running several information networks in Korea such as Edunet, Career Net and Work Net.

We are now planning to link such information networks together, so that the youth who need the information can use the comprehensive information at once.

In order to provide the high quality information for career planning and development, it is very important to produce refined contents on career prospects, the necessary knowledge and skills, the related programmes, etc. by the experts in the specialized institutions. We are now seriously considering the possible policy alternatives for the purpose.

The key challenge for policy makers is how universal access to high quality information and guidance services can be provided at an affordable cost. Traditional classroom-based and counselor-based models both have weaknesses in meeting this objective.

A more open and comprehensive strategy for the provision of information and guidance services should be derived. The key elements for that comprise wide use by students of self-directed techniques of personal assessment as well as job and course information, including computerized and on-line techniques, opportunities for all students to undertake periods of experience in real work settings and systematic involvement by community members such as employers, parents and alumni.

3) Strong linkage between schools and firms

In Korea there are growing concerns that vocational pathway curriculum is to be composed of the programmes, whether within or out of the schools, that make it possible for students to experience the working world. Young people who completed the vocational pathways, tertiary level and secondary level, appreciate the workplace experience the most, in comparison with the curriculum within the schools.

Workplace experience, combined with education, is very important. It aids matching of employers and young people, improving the quality of learning by making it more applicable and relevant, developing important work-related knowledge and skills.

It is not easy to assess the impact of workplace experience on transition outcomes, but comparative data shows a clear correlation between the opportunities for teenagers to combine their study with work and employment rates among young adults. Careful studies of the impact of apprenticeship show that workplace experience is closely associated with good outcomes for many young people, even if the particular features of what causes these outcomes are not always clear.

Apprenticeship, school-organized workplace experience, shorter periods within the workplace integrated into school programmes, part-time and holiday jobs comprise some of the possible ways to combine workplace experience and education. Each of these ways can vary widely in their purposes, nature and organization. Also each have impact on the extent to which they are learning-intensive, and upon the demands that they make upon the enterprises.

In OECD countries young people are now more likely to combine their studies with works because participation in apprenticeship has risen; substantial effort for school-organized workplace experience has been made; and the incidence of part-time work has grown strongly during the 1990s.

Also in Korea most of the students preparing for jobs prefer practice-centered education. However, except for practice programmes within school, the incidence of workplace experiences has declined dramatically after the economic crisis and it is considered as an early employment before graduation. Different types of workplace-centered programmes are very difficult to find in Korea. Even teachers in vocational pathways do not consider that workplace experience is appropriate for educational goal.

The incidence of part-time work has increased greatly in OECD countries recently. Furthermore, there is consistent evidence from several countries that students' part-time and holiday employment is associated with positive transition outcomes.

Traditionally, part-time or holiday employment is not so common in Korea as it is in Australia or UK. The proportion of upper secondary students taking part-time jobs is 22.8% on average, 40.8% for vocational students and 14.9% for general students. There is a clear difference in the proportion between students of different school records. The ratio moves in the opposite direction with the records, going up as the school records go down.

Tertiary education students are taking the informal experience of the working world through Arbeit rather than preparing for the qualification. Over three-fourths of the employed of tertiary education see the experiences of Arbeit very helpful for their working life.

Most of the general school students prepare for entrance into higher education while the rest of the students do not prepare for the working world. For them the workplace experience through part-time jobs is a very useful way to prepare for the working life, given that no other programmes are organized.

However, most of part-time or holiday jobs are not linked with the knowledge and skills of schools. As it is not possible to make their studies relevant, such experiences are sometimes considered to be harmful in the social context. Workplace experiences through part-time works should be well-organized, so that they relate to the majors in schools. The role of schools should be strengthened and the part-time work should be well structured.

Co-operative education and other forms of school-organized workplace experience can contribute to the study of vocational pathways. However, careful attention to quality control should be made. Screening employers, sharing ownership by the key parties rather than token consultation, and installing mutual benefits are some of the possible ways to make school-organized workplace experience more effective.

In particular, employer participation is the key to ensure the quality of school-organized workplace experience programmes. This is easier when supported by appropriate institutional arrangement, both from employer organizations and from school systems. The organization of the school should be made so that these programmes can form a normal part of their operation, supported by well-developed national policy frameworks

4) Well-organized institutional framework

Countries that consistently achieve good transition outcomes are characterized by strong institutional frameworks to support the transition. The nature of these institutional frameworks vary widely between countries, from the systems with strong industry involvement to the tight school-centered links with individual firms. Such institutional frameworks appear to be most effective when they are able to combine central regulation with local flexibility.

The well-organized system for networking and role sharing between schools and enterprises need to be established. Strong ties between schools and firms are necessary for a fit employment as well as for educational experiences in the real setting.

The formal strong ties between schools and firms can be blamed for the decrease in the efficiency of market mechanism. However, it contributes to better human resources development and utilization. The institutional network may be more effective than individual network because the scope of social life of students is very restricted.

Firms can get quality and concrete information on the competencies and attitudes of students and recruit new staff based on that information. In this way, firms can secure quality labor force better than through recruitment based on the market mechanism. Students can make efforts to develop their competencies by the stimulus of the workplace experiences and secure adequate employment.

However, traditions of persistent trust between schools and individual firms have not been established in Korea. Firms lay more emphasis on short-term profits. Furthermore, economic recession and increase in supply of college graduates have even loosened the existing ties between vocational upper secondary schools and firms.

Institutional arrangements become more important when economic and labor market conditions worsen. Effective national institutions appear better able to support the transition of teenagers during times of economic difficulty than of young adults. Such well-organized institutions have helped the teenagers, especially during the economic recession in 1990s in some countries.

It is necessary to encourage local partnerships or network among educational institutions, employers, trade unions, parents, local authorities, etc, as a way to strengthen these relationships and improve the transition. This is particularly necessary where the organized involvement of employers and trade unions in education and training has traditionally been weak.

Effective partnerships work best when both employers and schools can benefit from it. They require genuine shared ownership, not just token consultation. It becomes easier when supported by a strong institutional framework of both employers and schools.

Effective implementation of the policy needs to be given as much attention as the policy design. Effective personal relationships among the key parties and good relationships among representative organizations are required for sound transition outcomes. They help to improve the quality of information sharing, to build mutual obligations and to promote trust and sharing.

A council to facilitate effective transition to working life should be established. It can be composed of employers' associations, trade unions, and educational institutions, making the framework to promote partnership among stakeholders.

In some cases, intermediary bodies can be introduced to act as brokers between educational institutions and employers in order to improve the transition. They can benefit young people through spreading training over a wider number of firms by widening the network of firms providing workplace training. They can assist firms through their recruitment expertise and young people through their specialized labor market knowledge.

Some of the key features of successful transition systems are difficult to transplant to another countries without making modifications to key labor market institutions. For example, since particular types of occupational qualifications are required for entry to particular types of jobs, it may be necessary to regulate labor markets, requiring all employers to belong to economic chambers.

5) Social commitment to the transition of the youth

All effective transition systems require that societies assume responsibility for young people's transition. Societies with effective transition systems have focused on making efforts to ensure that as many young people as possible can make successful transition to the working world. Special arrangements such as inclusive safety nets or efficient recruitment systems are already in place.

In such a society, the schools, firms, citizens and authorities share the responsibility for the transition of young people from schools to jobs instead of leaving it to the individual students.

Countries with effective transition outcomes actively seek to achieve high rates of participation in and completion of upper secondary education. As Korea's participation in upper secondary school approach the universal level, the issue now is the extent of the achievement and preparation of the weaker achievers for the working world.

Providing all young people with a high quality upper secondary education while giving them opportunities for learning outside of the classroom is a key challenge. Upper secondary schools should be focused on laying a better foundation for lifelong learning as basic transition strategy during the transition phase.

Well-prepared and successful transition from upper secondary school to the working world is an effective method to reduce disparities in outcomes among different social groups. For the young people who drop out of school early, inclusive social safety net is one way in which societies can develop inclusive transition systems.

Korea's social safety nets are in their early stages, not so inclusive in their perspectives and tools. However, the inclusive transition system is the most important and substantial factor of the social safety nets. Therefore, the whole society should commit itself to designing and implementing effective transition systems as an effective social safety net.

5. Conclusions.

The patterns of transition from initial education to working life have been changing very rapidly in the recent years due to the fast changes in the knowledge economy and the diverse pathways taken by the learners. The gap between the initial education and the needs of the labor market is enlarging over time.

While key factors for the successful transition outcomes are reviewed above, considerable caution should be attached to their implications, especially when trying to transplant them to another country.
Successful transition system in one country may not work in another country without making necessary arrangements.

Likewise, the key ingredients of effective transition systems can work in different ways and in different circumstances to achieve success, depending on the context of national cultures, traditions and institutions. Therefore, we should pay special attention to the contextual difference among countries.

School to Work Transition of the Graduates in the Trade Technical- Vocational Institutions in the Philippines

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Abstract

The current national vision is to produce graduates in the technical-vocational education program who are technically competent to perform the emerging needs of the labor market. The success of technical vocational education depends largely on the congruence of institution to occupational practice. This cyclic confluence of theory and practice is completed only, when the students is finally absorb by industry and fits its requirements in terms of skills, work knowledge and attitude. To attain this vision in the Philippines, several approaches were implemented at the institutional level but varies extensively depending on the capability of each institution to carry out its specific program.

The most common approaches of school to work transition are the following:

1. The Dual Training System (DTS).

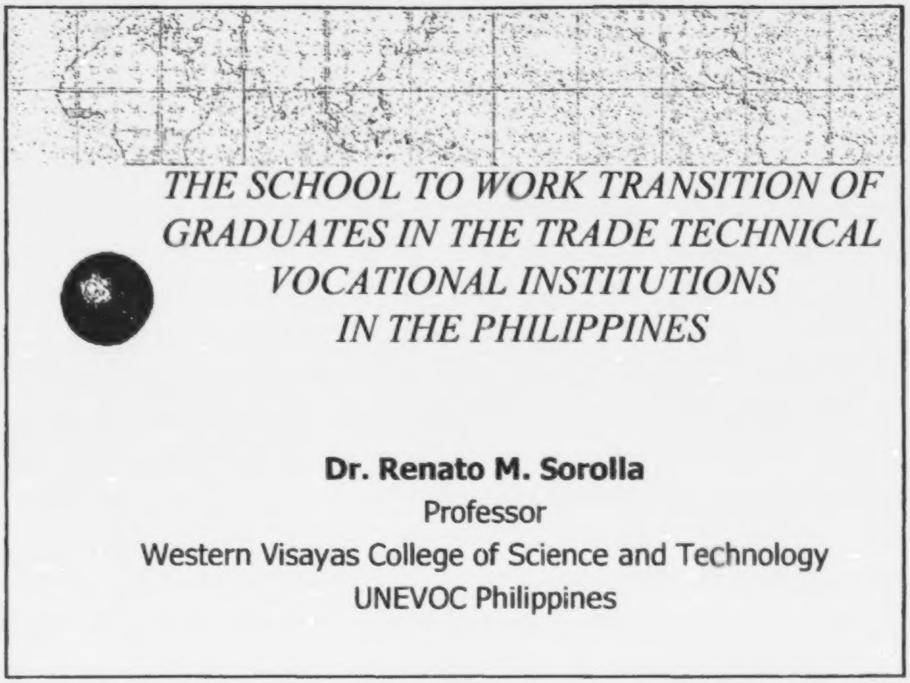
This type of training involves the school and the workplace as venue of training. The school provides the concepts, the work knowledge and orientation on desirable work attitude. The company provides the actual hands-on operation and experiences. This system requires the complementation of expertise and resources by both school and industries.

2. The Supervised On-the Job Training (OJT) Program.

The OJT is a subject enrolled by the student in school but report in industry for practical training. Its main objective is to develop industrial competencies to meet the current and emerging needs of industry. It aims to acquaint the students about the work setting, work schedule and policies related to the industries. Its focuses in the strengthening of the skills acquired in school for more gainful employment.

3. The Apprenticeship Training

This training is applied to graduates who seek employment in industry. If the applicant is still deficient in skill and knowledge required by job, he/she may apply for apprenticeship training with minimal compensation. He may be accepted as regular employee after proven ready to assume the role of a regular worker.



THE SCHOOL TO WORK TRANSITION OF GRADUATES IN THE TRADE TECHNICAL VOCATIONAL INSTITUTIONS IN THE PHILIPPINES

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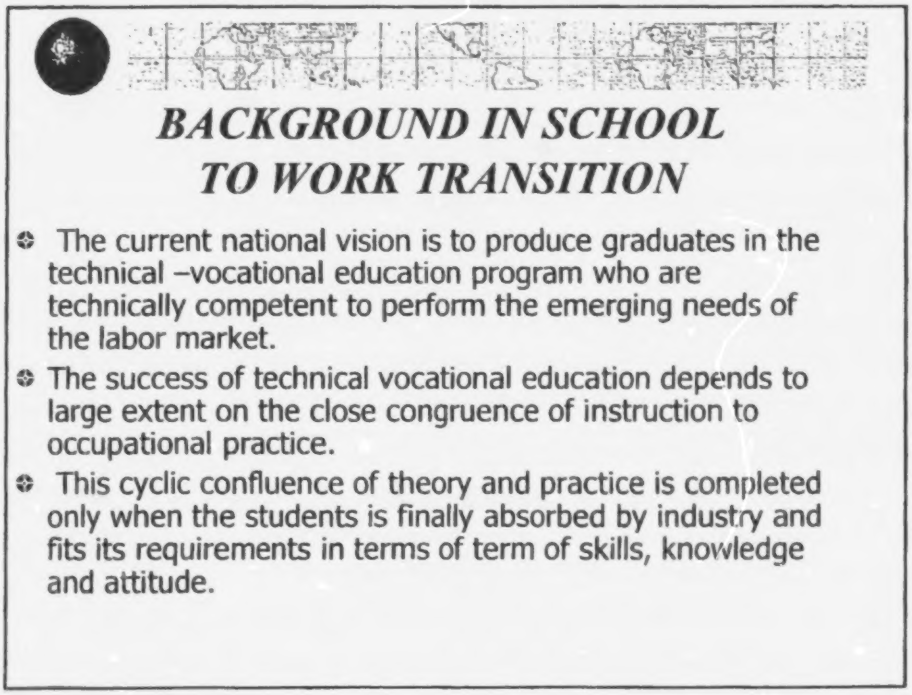

BACKGROUND IN SCHOOL TO WORK TRANSITION

- The current national vision is to produce graduates in the technical –vocational education program who are technically competent to perform the emerging needs of the labor market.
- The success of technical vocational education depends to large extent on the close congruence of instruction to occupational practice.
- This cyclic confluence of theory and practice is completed only when the students is finally absorbed by industry and fits its requirements in terms of term of skills, knowledge and attitude.

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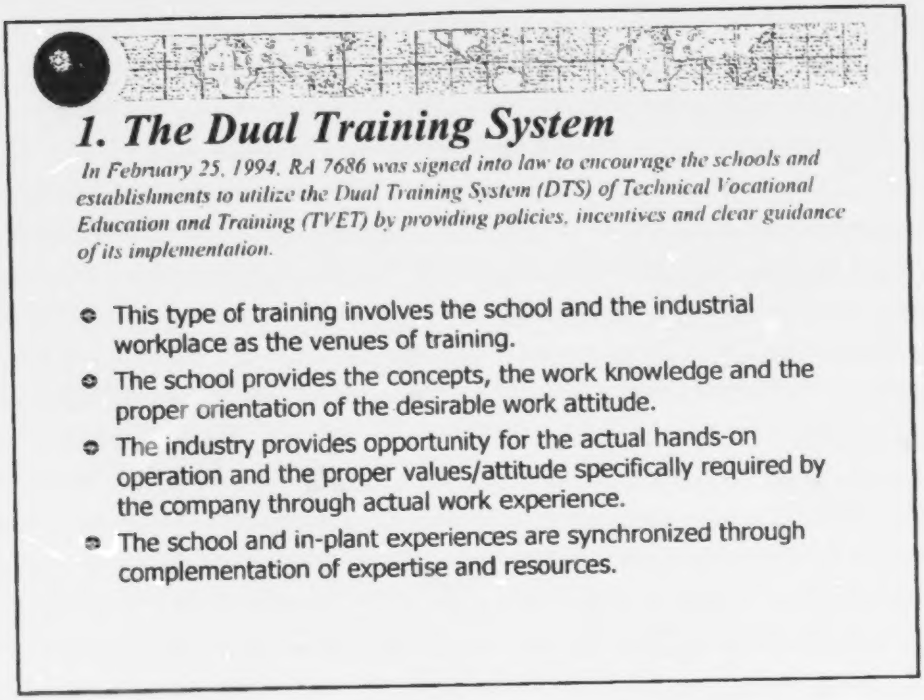
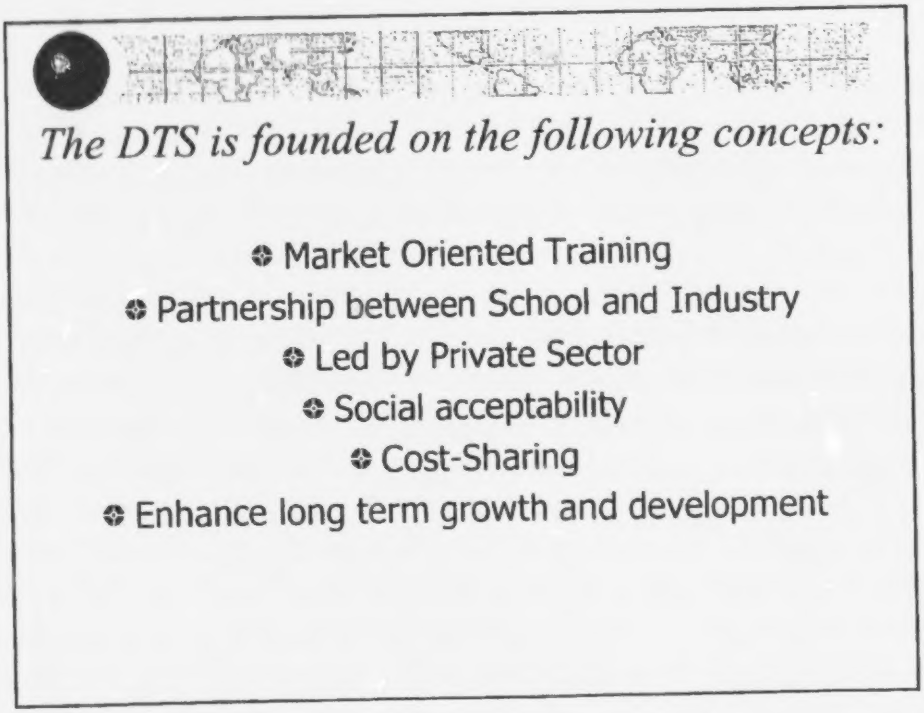


1. The Dual Training System

In February 25, 1994, RA 7686 was signed into law to encourage the schools and establishments to utilize the Dual Training System (DTS) of Technical Vocational Education and Training (TVET) by providing policies, incentives and clear guidance of its implementation.

- This type of training involves the school and the industrial workplace as the venues of training.
- The school provides the concepts, the work knowledge and the proper orientation of the desirable work attitude.
- The industry provides opportunity for the actual hands-on operation and the proper values/attitude specifically required by the company through actual work experience.
- The school and in-plant experiences are synchronized through complementation of expertise and resources.



The DTS is founded on the following concepts:

- Market Oriented Training
- Partnership between School and Industry
- Led by Private Sector
- Social acceptability
- Cost-Sharing
- Enhance long term growth and development

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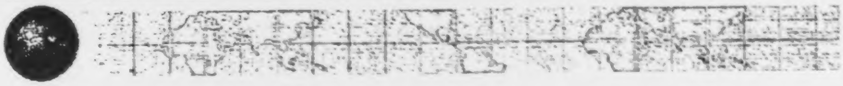
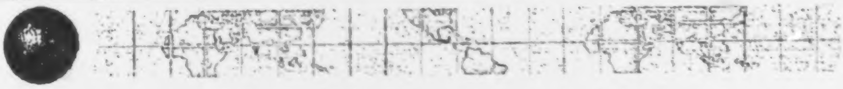


Implementation Details of the DTS

- The implementation of the DTS was made possible through the cooperation of the school and the company. The training plan was prepared in such a way that the trainee will learn both from school and company. The trainees learn the work values and related work theories in school while they learn how to operate the machines and perform the actual work in industry. Aside from technical skills, the trainee also learned the proper work habits and attitude such as getting along well with other workers, company officials and supervisors.



How the DTS and Apprenticeship program differs?

- In the Philippines, these two things are different. In the DTS, the trainee is a student who goes to the establishment for in-plant training while in the apprenticeship the trainee is an apprentice employed by the company who is given direct work-related instruction that need not necessarily be in accordance with the school setting.

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Technical Education and Skills Development Authority (TESDA)

- Accredits schools and business for DTS purposes
- Provide technical assistance
- Maintain/ documents the training plans
- Monitors the partnership forged
- Acts as the clearinghouse for problems met
- Provides and administer incentives to companies

With the DTS the following are made possible:

- Highly-Skilled Workers. Dual training enables industries to produce their own skilled workers in a more economical and systematic way.
- Quality conscious employees. Quality is inculcated among the trainees during the training program and becomes part of their consciousness that is very useful when they become employees of the organization.
- Safety consciousness. Trainees undergoing systematic guidance during the program become safety conscious and can bring about enormous saving when they are already hired as employees.
- Reduced maintenance expenses. With proper training, employees are assured of satisfactory equipment and facilities in good working condition.
- Reduced upgrading and training expenses. If investments are properly channeled to DTS instead of "hits and miss" training or short cuts training ploy expenses in any upgrading program to enhance skills will be minimized.

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- Savings on recruitment, selection and training for future breed of workers.
- A well design training plan will give industries ample time to test the skills and attitude of the prospective workers.
- Recovered investment. In DTS, productivity and performance can easily offset the company's investment.
- Workers acquire proper values. Proper work values through step-by step acquisition of skills are coupled with inter-personal dealings with workers and superiors.
- Fulfillment of corporate social responsibility.

2. *THE SUPERVISED ON-THE-JOB TRAINING PROGRAM*

- In the Philippines, one of the approaches adopted to prepare the individual for occupation is by actual On –the Job Training. The actual try-out on the real job is the best considered as the best test of the fitness for the job. The condition in the industry where the workers are trained can motivate him to do his work in the best possible way. This way, he develops the correct working and thinking habits and can attain a high standard of workmanship expected by business and industry.
- The OJT component of the technician curriculum includes three phases, namely; OJT 1 (180 hours), OJT 2 (180 hours) and OJT 3 (720 hours).

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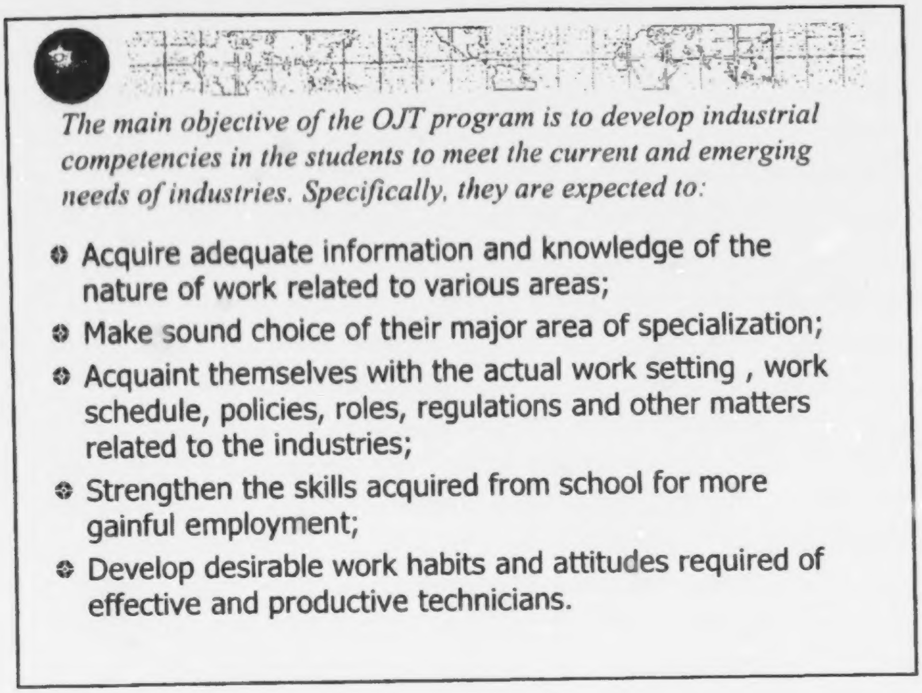
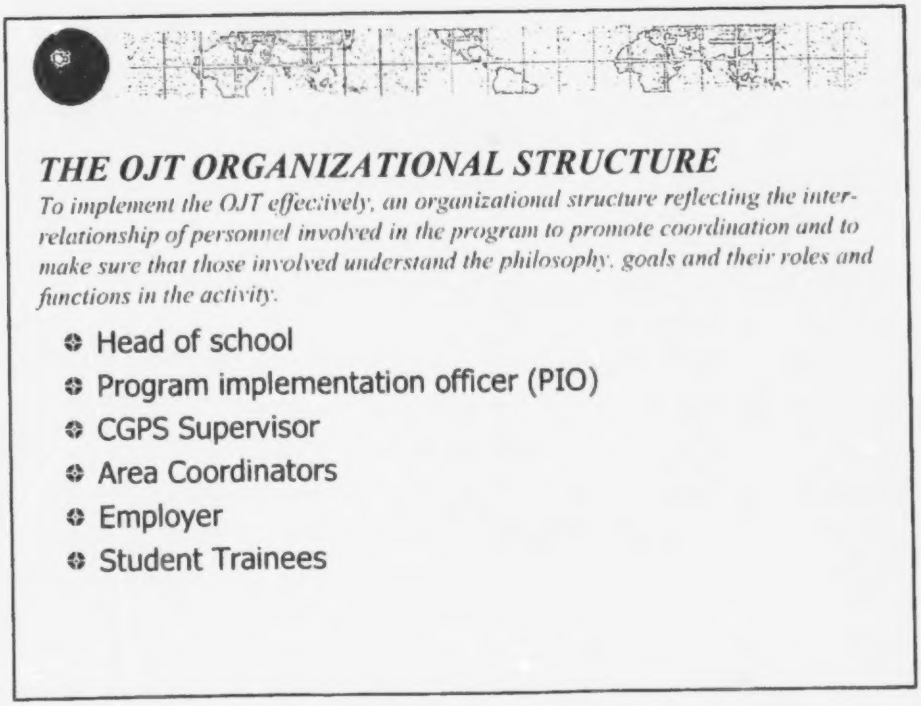


The main objective of the OJT program is to develop industrial competencies in the students to meet the current and emerging needs of industries. Specifically, they are expected to:

- Acquire adequate information and knowledge of the nature of work related to various areas;
- Make sound choice of their major area of specialization;
- Acquaint themselves with the actual work setting , work schedule, policies, roles, regulations and other matters related to the industries;
- Strengthen the skills acquired from school for more gainful employment;
- Develop desirable work habits and attitudes required of effective and productive technicians.



THE OJT ORGANIZATIONAL STRUCTURE

To implement the OJT effectively, an organizational structure reflecting the inter-relationship of personnel involved in the program to promote coordination and to make sure that those involved understand the philosophy, goals and their roles and functions in the activity.

- Head of school
- Program implementation officer (PIO)
- CGPS Supervisor
- Area Coordinators
- Employer
- Student Trainees

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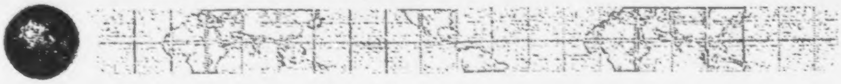

3. THE APPRENTICESHIP PROGRAM

- The apprenticeship program is mostly applied to those who have actually graduated from training institution and seek for employment to industries. The applicant if still found deficient in skills and knowledge required for the job for the job may apply for apprenticeship training. He may be given minimal compensation while in training. He maybe reinstated as regular employees after a certain period and after the time he is ready to assume the role of a regular worker of specific industry.

Implications

- The need for well-educated and skilled workforce is seen as an important factor in the advancement of the country. The human resource infrastructure of the nation must be designed with the capability to compete globally. The trends towards globalization put pressure in all countries to restructure their education and training system so as to meet the complex changes and emerging needs in workforce patterns, employment, opportunities, and industrial organization and practices.
- The development and utilization of human resources is necessary to foster and maximize economic growth. Improvements in human resource development are essential not only to pursue economic growth but also imperative for future national directions and sustainability. Technical and vocational institutions are given the crucial role of training the manpower skills. This will provide direction especially to resource allocation and investment for education and training.
- To effectively address to the global challenges along technical education and training, educational institutions in the Philippines still need to reorient their systems, policies and directions to meet the future economic conditions. On-going assessment on the placement of graduates especially the school to work transition, effectiveness of instructional delivery system, relevance of the content of the curriculum must be properly monitored and evaluated.

Vocational and Technical Education and Training in Vietnam and Issues of School-To-Work Transition

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Executive Summary

The education and training system in Vietnam is under the pressure of reform to prepare for the country a labor force with up-to-date knowledge and skills. Vocational & technical education and training (VTET) plays a key role in development of human resource. Vietnam is on the way of changing its VTET sector from national to local level. Along with changes in VTET sector, there have been changes in all sectors of the education and training system in order to create collaboration among them. However, constraints of source as well as existing mechanisms have made the reform process not pace with the expectations.

The paper is to introduce the status of VTET in Vietnam, policy, practice as well as strategy for development. It also mentions school - to - work issues in the context of Vietnam and actions should be taken to make a smooth transition of students from learning to the world of work.

Part I. Context of Vietnam's VTET

The VTET system plays an important part in the development of human resources for the country. For over last decade, the system have experienced dramatic changes in order to meet needs of the economic development. These changes have been made in almost of areas of VTET such as restructure of the system, improvement of training quality, upgrading facilities for training and expanding the size of training institutions.

The main objectives of VTET are to prepare both semi-skilled and skilled labor forces for industrialization and modernization in the country. These labor forces need to be equipped technical knowledge and skills as well as non-technical ones to be able to adapt to crucial changes of the workplace in the next years.

Although Vietnam's economy has gained some achievements with an increase in GDP about 7 per cent annually during the last ten year, Vietnam is a poor country with a population of approximately 80 per cent living in the rural area. While some new industries have emerged with highly demanding for skilled labors, a large part of other economic sectors does not seem to be very urgent demand for those labors. Therefore, the VTET system in Vietnam has to be multi-diversified with various forms such as formal and non-formal, long term and short- term, in-service training and workplace training.

VTET has to supply semi-skilled and skilled labors for both nationally and locally needs.

The VTET system includes over 300 colleges and schools where are training technicians and workers to service in such sectors as agriculture, industry, health care, tourism, construction and transportation. There are several higher education institutions offering both courses leading to diploma and certificate.

The scope and objective of the present VTET system of Vietnam can be summarized as follows.

- Short-term vocational training/re-training programs are for unemployed/ -employed individuals to get specific vocational skills and a certificate.
- 1 to 2 years vocational training programs are for students who have graduated from junior or senior secondary education to lead towards a vocational certificate. Upon duration and field of training, the learner can be granted certificates of

different levels of qualification from level one to level three. After finishing schools, students can be employed to work as skilled workers.

- Two to 3 year Vocational & Technical Education. These programs combine general education subjects and specific occupational subjects to lead to a diploma. The graduate will be able to enroll for higher education degree.

The VTET system is under state administration of MOET, MOLISA and other line ministries in the central level. In the local level, it is controlled by the local authorities - People's Committees, DOET and DOLISA. Such a system is very complicated. Therefore, it sometimes influences negatively the national policies on VTET development. The negative impacts are:

- Waste in using resources, while Vietnam is scare of sources.
- Unable to reach a common agreement of certification and standards.
- Broking the national education and training system.
- Difficult for articulation and credit transfer.
- Impediment to life-long learning policy.

Problems and difficulties

There are critical problems in the VTET system in Vietnam. They are

- Not meeting demands of the labor market for quality and quantity.
- Obsolete curriculum and courses and they are changed slowly.
- Lack of a management information system and labor market information.
- Socialization in education and training shows negative impacts on quality of training and increasing inequality to assess to educational facilities.

The reasons for the above problems can be:

- Vietnam does not a consistent policy on VTET development with other sectors in the education and training system.
- A lack of strategic brains to design systematically VTET.

- Limitation of sources.
- A majority of teachers is unqualified and conservative.
- A lack of motivation in students. VTET is usually the second option for the young as they were not successful to assess to higher education.
- The labor market has just formed, but not run perfectly.
- Low labor market demand for graduates from VTET institutions due to production grows slowly and qualifications are not relevant to needs of industries.

Part II. Policy and Practice

In the next decades, VTET will play a very important role in the development of human resources for the country. It is one of key factors contributing to development of the economy and society. Investment in human capital is considered as a top priority policy. Based on the above national policy guidelines, the DVTET has set up the following targets:

- Developing VTET qualitatively and quantitatively, in both selected areas and large-scale basis, to meet the demands of the labor force for the industrialization of the country.
- Training and upgrading teachers sufficiently to meet the demand of VTET activities suitable to the market economy.
- Standardizing and modernizing relevant training conditions, including training facilities of the VTET system.
- Upgrading and developing VTET institutes, including setting up of some key schools with regional standards for conducting high quality training programs for workers and technicians required by the key economic sectors of the country.
- Training sufficient numbers of technicians, skilled and semi-skilled workers for industrial zones and export processing zones within Vietnam, as well as in rural areas, and for exporting workers to other countries.

In order to gain those targets, DVTET's missions are:

- To check list and approve fields of training and put it in relevance to curriculum framework.
- To orient VTET in the society to change the view of the people about VTET.
- To improve quality of teaching and learning activities at some key colleges.
- To renovate objectives, content and method of training towards needs of the industry.
- To incept and conduct the articulation courses among levels of training.
- To mobilize resources of society for human resources development
- To maintain the partnership between VTET institutions and business.
- To strengthen and develop the international cooperation in VTET.
- To cooperate closely with General Department of Vocational Training (MOLISA) and other institutes to monitor quality of graduates and then set up an accreditation body for VTET as well as coordinate other activities related to VTET.
- To make a smooth transition from learning to work.

Policies on the VTET system are to aim at three things: Quality, size and effectiveness. In order to put the policy into practice, Vietnam has carried out concurrently solutions as the follows:

Training quality

- Upgrading VTET teachers with both teaching methodology and technical knowledge and skills. This is a plan to be conducted annually.
- Reequip VTET schools and colleges. Due to limitation of sources, we select 15 schools as key ones to be given more priority in funding.
- Linking VTET institutions with enterprises in order to raise practical skills for students and to use resources more effectively.
- Cooperating with enterprises and other institutions to set up occupational standards, qualification framework and accreditation.
- Renewal fields of training and curriculum framework.
- Promulgating the regulations and rules related to training quality.

Expanding size of schools and colleges

- Streamlining students who completed junior secondary schools (year 9) into two pathways: senior secondary schools (high school) oriented academic education and vocational secondary schools oriented both academic education and occupational training, but the latter is more focused.
- Reducing fee for student who study in VTET institutions.
- Making articulation and credit transfer easy between qualifications levels, while keeping the training quality.

Effectiveness

- Reducing costs of training is based on a reasonable increase in the number of enrollments into schools and colleges.
- Making partnership with enterprises to determine needs of industry and using production equipment more effective.
- Establish the management information system and labor market information to improve planning for resources and training.
- Fighting against corruptions in schools and colleges.
- Encouraging life-long learning.

Part III. School to work Transition (STW)

In other countries, the system of school to work includes three components: school-based learning; work-based learning; connecting activities component. It can be said that these components make a smooth transition from education to the world of work. School to work transition is a new concept for educational and training in Vietnam although it has been developed in a number of countries such as the United States (School-to-Work Opportunities Act), Republic of Korea and Finland (Bridge from Education to Working Program), Germany and UK. School to work initiatives from other countries may offer good experiences for VTET Vietnam.

Recently, Vietnam does not have such a system of school to work. The system of education and training of Vietnam is running without so much of cooperative efforts amongst sectors of primary and secondary, vocational-technical education, and higher education. This system does not help all the young and shift school-based learning experiences to work-based learning and then to the workplace.

It is true that building up a STW system in Vietnam is an imperative issue because Vietnam is a country with an unemployment rate of 6.4 per cent in urban areas and labor time of population in working ages in the rural areas is about 74 per cent of year's time. Almost of them, do not receive any unemployment subsidy from the Government.

A high rate of unemployment may be explained as because of mismatch of trained skills, drop out of school early without training event in entry-level and low demand of labor market. Besides Vietnam, lacks a school's counseling system to help students follow their career tracks when they are in school.

At the same time, the educational system in Vietnam seems to be a less open one. Students may get more difficult in articulation of their study from high school to college and from the secondary vocational school to the post secondary institution. Up to now, Vietnam considers the good practices from USA, Canada, Australia (TAFE), Republic of Korea, Thailand and Taiwan to design policy on articulation and credit transfer in the education system and make transition process smoothly.

However, there exist many pitfalls in terms of curricular, teaching staff quality, accreditation, and other physical conditions.

To build a STW system, Vietnam needs to take a series of the following actions as below:

- To reform curriculum in all level of educational system. Now, Vietnam is redesigning curriculum in primary and lower secondary school. In next coming years, innovated curriculum in high school will be implemented after those of two previous levels are completed. In the curriculum of high school, vocational and technical subjects will be put more along with academic subjects. Students have some courses to choose one that is suitable for their owns.Curriculum must have connections between learning and work experiences. It requires an integrated approaches between academic and vocational contents into instruction and learning. Besides, Vietnam should apply the international practices of assessment in both classroom and the workplace. At the same time, content of training programs and ways of instruction as well as classroom practice should be focused on the independent development and self-determination ability of students. They should take responsibility for their learning and careers.

- To create more tracks in high school with vocational and general tracks. Now, MOET is conducting the project of development of a new model of high school - technical high school. There both vocational skills and academic skills are taught.

- To reshape system of post-secondary and higher education. During many decades, the higher education sector in Vietnam has focused much on theory for research and science, but not much on practice and new technology for the market needs. Both VTET and higher education should be reshaped into three pathways: academic, professional and technology. This will help the young follow pathways fitting with their own capacity. At the same time, graduates from colleges, institutes of technology and university may be easier to find job in the labor market. Polytechnic institutions need to be established in three pathways: setting up new higher vocational technology education institution; re-structuring and upgrading secondary vocational& technical schools; developing new higher vocational courses in universities or member institutes within university. Now, Vietnam has taken 15 secondary vocational

& technical education institutions as key schools to be upgraded with a ADB project of about US$ 120 millions. Two or three of them will become the polytechnic institutes in the future.

- To carry out professional development for teachers, staff and manager of VTET institution. Professional development can be considered as an important solution to engage VTET people in STW programs. The teacher must be retrained with new programs to upgrade pedagogy and technology skills as well as commercial, labor market and social skills and knowledge. However, professional development must go along with personnel policies to make VTET more attractive to VTET teachers and trainers in order to avoid "brain drain" to other professions. At the same time, people in the management level of VTET institutions, educational and training authority bodies from central government to local government should be given priority to improvement of their management skill and mind-set. Every reform's effort can be blocked unless leaders in these organizations clear the goals and the way.

- To invest appropriately in learning materials such as textbooks, media added teaching, and other teaching equipment. With a number of over 10,000 teachers and trainers in VTET institutions in Vietnam (majority of them is unqualified), it will be very difficult to upgrade their knowledge through in-service training programs due to time-scale and scare sources. Publish of technical textbooks is considered as a strategic solution to address the problems of unqualified teachers. Both students and teachers can get benefits from new textbooks. Importing English technical textbook should be considered as one of the ways to save money invested in education and training and to speed up reform process. DVTET encourages schools and colleges to use English technical textbooks, especially in the areas related to high-tech.

- To make cross-sector partnerships and get partners involved in STW programs. To be effective long-term collaboration, the Government should have policy to encourage both state-owner and private-owner enterprises' commitment to work-based learning by imposing reduced tariff and funding for them. Partners should share vision, beliefs, attitude and resources among them. Local authorities and providers of education and training should take the role of making connections between schools and enterprises and nursing the collaboration established..

- To establish a career information and guidance system. Up to now, the system like that is not set up due to a slow change in macro-policy when the country shifted from a centrally planning-based economy to a market economy and perhaps, because of the constraint of resources. There have been some centers of employment counseling and job seeking services but they work separately with untrained staff. These services are regarded as appendages and one-stop (not ongoing) to the system. Vietnam has plans to set up a network of this system and recruit and train staff under supporting of the Government and ILO.

In conclusion, STW system established in several countries shows potential benefits not only for students but also for business and industry. To set up such a system, Vietnam has to consider all aspect of the educational reform from system, institutional to individual level. Each country's conditions differ from others', therefore it is the need to use appropriate and flexible strategies to archive their own goals.

자유토론

◆ **School to Work Transition in Australia** / *Ms. Katrina Ball*

Q 학교교육 과정의 확대가 직업교육과정의 확대를 의미한다면, 이를 위한 교사는 어떻게 충원하고 있는가? / Dr. Hoang Ngoc Vinh

A 교사에 대한 재교육을 실시하거나 vocational institute 출신들이 주로 이를 담당함. 또한 part-time 강사를 활용하는 등 유연하게 대처하고 있음. 지역 학교 간에 강사를 공동활용하며, 학생들이 지역의 집중 직업학교에 모여서 시설설비를 공동활용하고 있음.

Q 산업체에 취업하기 위한 기준이 있는가? / Dr. Renato M. Sorolla

A 국가자격제도의 틀이 있으며, 교육훈련기관 (provider)과의 협력에 의해 만들어진 industry qualification이 있음.

Q 기업과 교육기관이 교과과정을 공동으로 개발하는가?
/ Mr. Vichit Tichantuck

A 교육훈련에 관련된 주정부가 관여하기 때문에 공신력이 있음. 호주에서도 파트너십을 강조하며, 이는 주로 훈련기관의 관심 이슈임.

Q 학생들의 75%가 중등교육을 이수하고, 중퇴자의 25%는 도제제도에 참여하는 것으로 발표문에 서술되어 있는데, 이 중에서 자격증을 이수하지 않고 교육훈련에 참여하지도 않는 나머지 12%의 현황은 어떠한가? / Dr. Gisela Dybowski

A 대부분 성공적으로 노동시장에 참여하고 있음.

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Q 훈련을 이수한 후 관련직업으로 취업하고 있는가? / Ms. Annie Bouder

A 추적조사에 의하면 직업자격증 과정을 마친 후에 반드시 그 직업으로 취업하는 것은 아닌 것으로 나타났음. 그 이유는 인근지역에 고용기회가 없기 때문이기도 하며, 훈련과 노동시장의 관계가 구조적으로 일치하지 않기 때문임. 그러나 지역내 훈련기관 간의 강사 공동활용제도가 있으며, 이것이 인근지역에 취업가능성을 높이는 요인이 되고 있음.

Q pre-vocational course는 정부차원에서 또는 민간차원에서 지원되고 있는가? / Dr. Masriam Bukit

A 주로 정부에서 지원하고 있으며, 연령과 관계없이 직업자격증을 획득하기 위한 과정임. 예를 들어 주부, work to school, non-labor market to school을 지원하고 있음.

Q 호주에서 최근 중퇴률이 감소하는 원인은 무엇인가?

A 19세 미만의 청년층이 full-time 으로 일하는 것이 어렵기 때문임. 직업교육훈련에 참여하는 경우 청소년 수당 등 정부차원의 소득보전 인센티브가 있지만 그러나 교육훈련에 참여하지 않는다면 수당을 받을 수 없기 때문임.

◆ Main Issues for Effective Transition System from Initial Education to Working Life in Korea / *Mr. Ho-jin Hwang*

Q 독일의 경우에는 직업교육훈련에 노동조합이 핵심적 역할을 하고 있음. 한국에서는 노동조합의 역할이 어떠한가? / Dr. Gisela Dybowski

A 한국의 경우 노동조합은 직업교육훈련에 별다른 관심이 현재까지는 없었음. 최근 정리해고가 많아지면서 훈련에 대한 관심이 높아지고 있으며, 근로자교육훈련기금 마련을 위해 노력하고 있음.

Q 학교와 기업간의 연계강화를 위한 인센티브가 있는가?

/ Mr. Vichit Tichantuck

A 구체적인 인센티브는 없으며, 기업들은 별다른 노력을 보이지 않음. 잠재적 근로자에 대한 인적자원개발 투자에는 관심이 없는 편임. 이를 개선하기 위해 협회, 위원회 구성, 학교와 기업 간의 민간기구 설치를 제안할 수 있음.

Q 한국에서 취업기회가 적어 대학생들이 4년이내에 졸업하지 않는 추세에 있음. 대학재학기간이 연장되는 현상에 대해 어떻게 생각하는가?

A 장기적으로 대학을 졸업하지 않는다면 생애총소득은 감소될 것임.

Q 한국에서의 dual system의 성과를 어떻게 판단하는가 / Dr. Masriam Bukit

A 실패하였다고 볼 수 있음. 노동시장이 대학 졸업장 소지여부에 의해 일방적으로 결정되는 왜곡된 구조로 고착화되어 있어서 직업교육 경로를 만들어내기 어려운 실정임. 결국 학력이 아닌 능력에 기반한 노동시장으로 재조정되어야 함.

Q 한국에서 교육훈련내용(전공)과 직업내용의 일치도를 높이고자 하는 정책적 노력은? 참고적으로 베트남의 경우 노동시장 구조를 변화시키기 위해 대졸 고학력 인력이 많이 요구되고 있음. / Dr. Hoang Ngoc Vinh

A 한국상황에서 해결하기 어려운 문제이며, 전공과 직업의 낮은 일치도는 대부분 공급과잉에 연유하기 때문에 교육제도, 산업구조 등과 연관된 복잡한 이슈임.

◆ School to Work Transition of the Graduates in the Trade Technical-Vocational Institutions in the Philippines

/ Dr. Renato M. Sorolla

Q 산업체와 공공부문의 직업훈련비용 분담비율은 50:50인가? / Dr. Gisela Dybowski

A 산업에 따라 다르며 구체적이지는 않지만 대충 70:30 수준이며, 세금혜택 등의 인센티브를 주는 경우도 있음.

Q Dual system이 적용되는 산업분야는? / Mr. Vichit Tichantuck

A 전기, 전자, 자동차, 용접 등 7개 분야임.

Q 한 교육훈련기관에서 Dual system, OJT, Apprentice 등 세 가지 프로그램을 모두 운영하는가? / 오만 대표자

A 기관의 성격에 따라 한가지 방식의 프로그램만을 선택하여 운영하고 있음. 예를 들어 dual system은 과학기술대학교에서 도입하였으며, OJT는 기술대학에서 도입하고 있음. 또한 프로그램에 따라 훈련대상이 다름.

Q OJT에 관해 구체적으로 설명해 주시오? / Katrina Ball

A OJT는 학교교육과정의 일부이며, 2년간 학교에서 수업을 받으면서 산업현장에서의 능력을 테스트할 수 있음. 1, 2, 3 급으로 구분하고 있음.

Q Dual system 참여 학생들에 대한 수당, 훈련기간은? / Ms. Annie Bouder

A Dual system 참여자는 학생의 신분이므로 급여가 지급되지 않음. 단 기업에서는 시설제공, 유니폼 등의 인센티브를 제공하고 있음. OJT의 경우에는 supervisor의 감독하에 작업을 수행하므로 수당을 지급하며, 대기업에서는 이들 중에서 신규근로자를 채용하는 인센티브를 제공하고 있음. Dual system에서의 훈련기간은 3년이며(720시간), OJT는 7년임.

Q 필리핀의 TESDA 조직에 대해 설명해 주시오?
/ Dr. Gisela Dybowski

A TESDA는 국가인력훈련센터, 기술훈련원이 통합된 형태로서 13개 지역에 지부를 두고 각각의 director가 운영하고 있음

◆ Vocational and Technical Education and Training in Vietnam and Issues of School-to-Work Transition

/ Dr. Hoang Ngoc Vinh

Q 국가별 사례발표에 대한 보충설명 요청 / Vichit Tichantuck

A 베트남에서의 빈번한 학교비리, 교육훈련책정예산의 유용, 학교운영의 투명성 제고 차원에서의 발언임.

Q 기술교육훈련기관 신입생의 자질 등 베트남에서 가장 심각한 문제는 무엇인가? / Dr. Renato M. Sorolla

A 우수 훈련생 및 교사 자원의 확보문제임. 현재 만3천명의 교사가 있으나 자질이 매우 낮은 실정임. 기술교과서를 수입하는 것이 오히려 유효할 수 있음.

Ⅳ. 성인을 위한 재교육 · 재훈련

1. 주제 발표

- **Effective Reskilling for Adults** .... *Dr.Gisela Dybowski*
- **Adult Reskilling in Korea** .... *Dr. Young-hyun Lee*

2. 국가 사례 발표

- **The National Qualification System for Liniking Schools and Workplace in Indonesia** .... *Dr. Masriam Bukit*

3. 자유 토론

Effective Reskilling for Adults

Presented by Dr. Gisela Dybowski
Head of the Department International Vocational Training, Federal Institute for Vocational Training (BIBB), Germany

Abstract

Especially retraining has gained enormously in importance over the past few years as a result of major structural changes taking place in Germany. Reskilling in a recognized training occupation under the German retraining model provides adults the opportunity to obtain vocational qualification for the first time or, if the current occupation no longer offers any job prospects in the labor market, to be trained for a new occupation. This opportunity to acquire a new vocational qualification is of special importance to many working persons as a result of economic and structural change and the resulting need for people to reorient themselves occupationally.

The way how the German retraining model provides employees and individuals with qualifications to perform company - and labor - related tasks, will be demonstrated on to examples in part one. Closer analysis will then show, however, that this form of reskilling of adults is not sufficient to meet the challenges of the future. The reason being that what people have learned in the past no longer suffices to meet requirements throughout people's entire occupational lives. Individuals must accept changes in their work and their profession more than in the past and constantly develop their knowledge and skills further.

So what are the prospects? Different factors will be examined in terms of how they contribute to successful continuous vocational training of adults. Beyond this, initial steps taken in this direction in the fields of policy and economics

through collective bargaining arrangements and financial subsidies from the government will be examined, as well as adult learning, in particular among older employees.

1. Forms and examples of reskilling in Germany

I shall examine this topic from the perspective of a country which - similar to the case in other industrialized nations - has experienced major structural changes over the past few decades (Diagram 1) and which was as a result confronted with the problem of "reskilling of adults" early on. In addition to other forms of vocational training - "initial vocational training" and "continuing vocational training" - reskilling or retraining of adults (Diagram 2) has taken on enormous importance in the past and has been promoted by the Federal Labor Office with considerable financial resources. Reskilling in a recognized training occupation under the German retraining model provides adults the possibility to acquire a vocational qualification for the first time or, if the to-date qualification no longer holds out job prospects in the labor market, to be trained for a new profession. This opportunity to acquire a new vocational qualification is of special importance to many working persons as a result of economic and structural change and the ensuing need for people to reorient themselves occupationally.

Here are some figures: Diagram 3 shows trends in the number of persons taking part in continuing vocational training subsidized by public financial resources over the period 1995-1999. As Diagram 4 shows, more than one-third of the participants underwent retraining to obtain further qualification (41 percent in 1995, 38.5 percent in 1999). The increasing share of women as a percentage of persons completing a retraining program is remarkable. The percentage of persons undergoing retraining who were previously unemployed is over 85 percent. Most persons completing retraining programs (Diagram 5) - about two-thirds - are under 35 years of age. The age structures of persons completing programs from the old and new German Lander have become more similar. Almost half of the participants in retraining programs have only received a degree from a lower-level school. Almost 50 percent of the persons taking part in a retraining program have already completed a vocational training program.

I would like to demonstrate how this retraining of adults in Germany is organized by providing two practical examples:

(1) Twenty-nine-year-old Hannelore Schneider is married and had not worked in her occupation since her two children were born. Now they have passed the toddler stage and she would like to return to work. But it is difficult to find a job in her old field of soldering. Workers with these qualifications are not longer in a great demand since companies have become automated. So Hannelore is being trained as a chef. This is a recognized training occupation. During the two years of her retraining, Hannelore receives a maintenance allowance under the Labor Promotion Law. Her course fees and other course costs are also paid. Despite all the financial help she receives, the retraining demands a high level of personal commitment. She still has to cope with the double burden of learning and taking care of her family.

(2) Twenty-seven-year-old Stephan Kloth has been employed for seven years as an unskilled worker and he has now decided to train in a recognized craft trade occupation. After receiving counseling at the Labor Office he goes to an interview at a vocational training institution which provides training to prospective gas and water installation workers, the trade he wishes to pursue. His retraining course will take two-and-a-half years here. This is shorter than the normal training course because the trainees have already acquired certain qualifications while working at their old jobs. Stephan's retraining program will end with a final examination before the Chamber of Handicrafts. It will be based on the state training regulations. Just like Hannelore Schneider, Stephan's course fees and other costs are reimbursed by the Labor Office. The Labor Office also pays his travelling expenses and two third of his previous wage each month so that he can support himself.

Both examples demonstrate: The Labor Promotion Law of the Federal Republic of Germany helps to maintain or reinstate the career opportunities of employees so that they are able to compete freely in the labor market after they have interrupted their working life. The Labor Promotion Law also provides a good deal of financial aid to help reintegrate socially disadvantaged groups into working life.

2. Challenges for the future

A critical point deserving analysis, however - and this leads to the next point - is the fact that we will not be able to solve future challenges in the same way retraining has worked in the past. Nowadays all employees have to expect that they will undergo continuing training over the course of their working life in order to upgrade their qualifications and competencies. Rapid changes, i.e. globalization, international division of labor, structural changes, IC technology, a high rate of change and innovation (Diagram 6) emerge in challenges for lifelong learning which can scarcely be dealt with any longer using traditional forms of retraining.

Today, a large percentage of working people in Germany is acquiring the qualifications they need through continuing retraining programs. Thus the percentage of people who make use of continuing education programs more than doubled in Germany for the age group of persons aged 19 to 64 over the period 1979 (23 percent) to 1997 (48 percent). Interest in continuing vocational training has increased particularly greatly. It has risen by more than threefold over the same period of time.

In spite of these on the whole positive developments, one must not overlook the fact that today we are still far short of a situation where all working persons have the same opportunity to maintain and expand their qualifications. Numerous surveys in companies show that many employees especially criticize insufficient opportunities for continuing education and training with regard to their working conditions. Employees increasingly want to secure their jobs by means of continuous training and qualification; they want to open up new development prospects or - and this applies especially to women - to once again pursue a job career after raising a family. Finally, lower-qualified persons face an increased need to acquire additional knowledge and skills by means of further education or retraining because the risk of becoming unemployed will otherwise increase.

The 5th International UNESCO Conference on Adult Education has called in the "Agenda for the Future of Learning during Adult Age" for at least 6 percent of gross national product of the member states to be invested in education. According to the Federal Government's 1999 Education Finance Report, Germany spends approximately 6.8 percent of its gross national income on education and research universities. Vocational training accounts for 13.8 percent of spending on education and 7.1 percent of spending on further education and retraining (not including the costs of participants and staff costs at companies).

Taking a closer look at all this, we find that in spite of major financial expenditures on further education and retraining schemes, Germany is still an "initial training-based society". The most important degrees and qualifications in occupational life are generally acquired through initial vocational training or university studies. Opportunities missed here are not easy to make up for later. We lack a system of accredited, modular continuing vocational training programs allowing basic and additional qualifications to be acquired in a systematic, recognized manner including during later stages of working life to counter tendencies towards social exclusion.

There are also more and more enterprises whose human resources development is increasingly "youth" centered. Demographic change is requiring new concepts for human resources development. As recently as the year 2000 more than one-third (34 percent) of persons working at German companies were over 45. The 35 to 45-year olds accounted for almost 30 percent. In Germany more and more employees will have to work longer in the future as a result of the declining birth rate, and it will no longer be possible to have younger people replace older employees leaving working life.

More and more enterprises will have to deal with structural change and innovation with aging workforces before the end of this decade as a result of demographic trends. This especially applies to old-economy businesses and especially to large companies. Diagram 8 shows the age structure for German industry broken down into age groups of five years in 1996. It can be seen especially clearly in the case of large companies that there is a focus on the 50 to 55-year-old age group, which over the next 10 to 15 years will be nearing retirement age. One can also see that this curve has declined sharply with regard to 60 year-olds over the past years.

3. Approaches towards successful continuous learning by adults

So what are the prospects? To what extent do company human resources development and public training policy support especially older employees? Human resources planning which reflects on the age structure of the staff and identifies this as a strategic field of action is only to be found thus far in very few enterprises. In many enterprises there still appears to be an imaginary age borderline of 35 to 40 with regard to participation in continuing education and training activities. Measures for younger staff tend to be viewed by personnel managers more as an investment in the future. Special human resources development measures for older people are not to be found at most companies.

There is a lack of specific programs and training strategies, i.e. older staff are more dependent than their younger colleagues on self-initiative and on-the-job learning. The situation is not much different with regard to publicly subsidized further education and retraining. As has already been noted in the foregoing, the majority of participants in retraining programs are under 35. And statistics on occupational further training indicate that participation of people over 50 is significantly less than for other age groups, even if this percentage has risen over the past few years.

Some tentative rethinking can be seen, however, as a result of the discussion over life-long learning, which is being intensively discussed at present not only in Germany, but also throughout Europe and the world. This can be clearly demonstrated by the vocational training measures for adults subsidized by the German Labor Services. Here significant shifts are taking place in the focal point of promotion at present: In addition to retraining, expenditures on which have been considerably decreased, continuing education programs to safeguard jobs are being increasingly promoted for disadvantaged young adults, unskilled labor and persons whose jobs are in jeopardy, and these have a considerably shorter training period. At the same time trade unions in Germany are presently attempting to obtain collective bargaining arrangements for the training of employees. Employers and employees are currently discussing models which allow employees to save time in so-called "time accounts" by working overtime and then using the credited time to take part in continuing education and training programs. In addition, negotiations are taking place on providing certain groups of people in companies with a claim to qualification. This involves employees over 40 who would receive up to 3 months of retraining to refresh their basic vocational know-how. Further education and training programs for older employees at small and medium-scale enterprises with up to 100 employees are to be subsidized for 4 years with financial resources from the Federal Labor Office.

Taking advantage of these opportunities, however, requires suitable forms of developing skills and competencies of older employees. Older staff must be motivated to actively take part in learning and knowledge-exchange processes over a longer period of employment.

Moreover, lifelong learning is only possible if individuals have access to respective material and time resources for learning. Younger and older people need to be provided learning resources designed in such a manner as to have a supportive, motivating effect. Job rotation and changes in jobs are important learning channels if they translate into an increase in knowledge and experience.

Nowadays there exist a great variety of examples of successful continuous training of adults.

Their success is for the most part based on

- Producing a positive change in attitudes towards learning,
- Comparing job related requirements with individual competency profiles in order to better open up and further develop existing potentials,
- Promoting multi-generational teams in order to allow a multi-generational exchange of knowledge and experience,
- Arousing a willingness to learn and initiative among employees by showing individuals what prospects there are and
- Closely linking further vocational training and human resources development at companies.

The overwhelming majority of these measures cannot be commenced with only after people reach 50 to 65 years of age. One must start, rather, at younger ages. Vocational qualification must be secured in the form of lifelong learning along the lines of continuous further training.

Allow me to summarize these prospects briefly. Numerous pilot projects have produced the following, almost identical findings:

- Learning and dialogue capabilities, knowledge and experience will be the crucial human resources in the future which companies use to cope with technological and organizational change.
- Knowledge-based synergies need to be created via a dialogue between younger and older employees, as the resources of "knowledge" and "experience" are linked to persons as well as communications and documentation processes.
- Older staff have occupational and specific company knowledge in dealing with complex situations as well as social competencies they have developed and staff competencies as well (e.g. confidence, self-respect, faith in oneself, etc.). They also have highly refined analytical skills and are familiar with company processes. They also know individuals at the company and are familiar with company structures due to long years of experience. They know how to use informal channels and "get things done".

- Companies which view themselves to be learning organizations are attaching more and more value to maintaining and using these competencies and strengths of other staff and are increasingly networking these with a willingness to innovate and new, state-of-the-art technical knowledge possessed by younger employees.
- The transfer of knowledge and experience between young and old does not come about all by itself, however. It needs to be promoted deliberately and in a targeted (systematic) manner. This requires new company culture philosophies and networked learning and work structures.
- Providers of educational and training programs can lend crucial support to companies/organizations in this organizational development process. The buzzword here is: Providing educational training programs as a form of change management for companies who are on the path to becoming learning organizations.

The Past :

Challenges

- "After-Japan-Period in industrial production
- Change of paradigms
- New goals :
  - o more consumer orientation
  - o better quality
  - o improvement of delivery

Challenges

- Uncertainty grows because of continuous changes in many fields
- Inability of industry to forecast future demand of qualifications
- Structural mismatch of training market and labour market (growing service sector)

Diagram 1

VOCATIONAL TRAINING

Initial vocational training

- basic vocational training
- occupation-specific knowledge and skills
- occupational experience
- personality development

Continuing vocational training

- to consolidate and broaden knowledge and skills
- to update knowledge and skills to keep pace with technolgocal
- to facilitate occupational advancement

Retraining

- to qualify skilled workers for other occupational activities

Diagram 2

Persons taking part in vocational further training in Germany 1995-1999

Number of persons on annual average total	1995		1996		1997		1998		1999	
	absolute	in %	absolute	in %	absolute	in %	absolute	in %	absolute	in %
	552,550	100	537,681	100	424,774	100	344,713	100	358,128	100

Source : Federal Labor Office

Diagram 3

Of this amount : persons undergoing retraining in recognized training occupations) 1995-1999

	1995		1996		1997		1998		1999	
	absolute	in %	absolute	in %	absolute	in %	absolute	in %	absolute	in %
Retraining	226,731	41.0	222,910	41.5	194,079	45.7	125,267	36.3	137,970	38.5
Of this : prev. unemployed	194,513	85.8	195,056	87.5	169,332	87.2	-	-	114,717	83.1
women	114,595	50.5	116,242	52.1	101,356	52.2	65,086	52.0	71,421	51.8
Foreigners	20,704	9.14	25,168	11.1	25,432	11.2	-	-	-	-

Source : Federal Labor Office

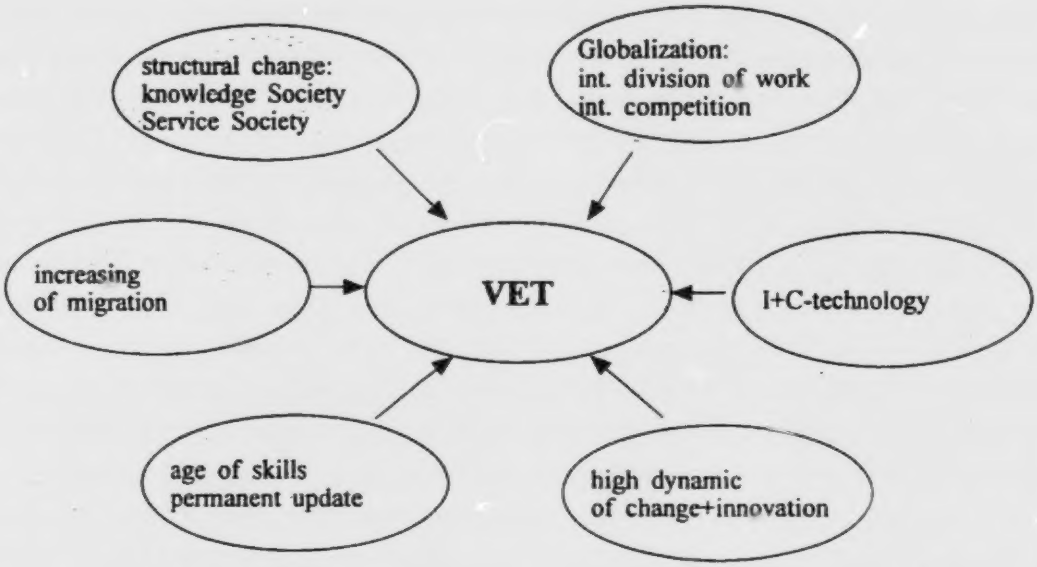
Diagram 4

Retraining with a degree in a recognized training occupation

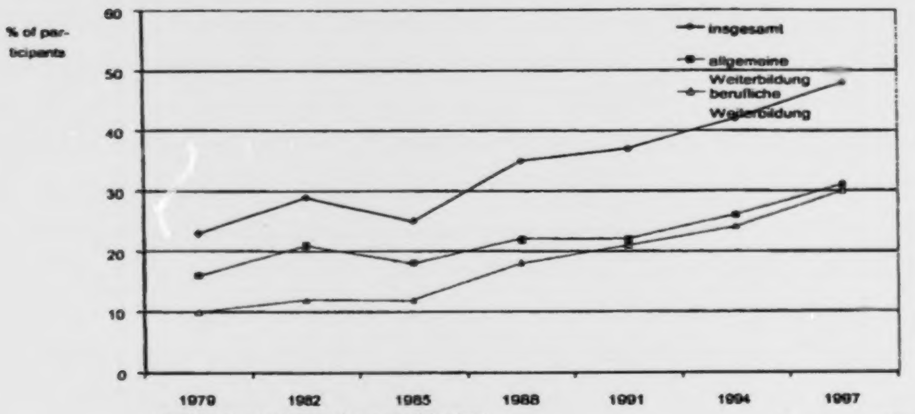
Traits of graduates	Old Länder	New Länder
Women	43.3	61.5
Men	56.6	38.5
Under 35	68.5	62.2
With degree from Hauptschule (without "0 levels")	50.4	15.7
With "0 levels"(without unversity entrance levels)	26.1	71.7
Without completed vocational training	43.5	4.1
With company vocational training	47.7	79.5

Diagrams 5

Challenges for modernization in VET


structural change:
knowledge Society
Service Society
Globalization:
int. division of work
int. competition
increasing
of migration
VET
I+C-technology
age of skills
permanent update
high dynamic
of change+innovation

Diagrams 6



Participation in further education 1979-1997

Source: Kuwan 1999

Diagram 7

Age profile acc. to size of company, staff (not including apprentices), industry 1996 in %

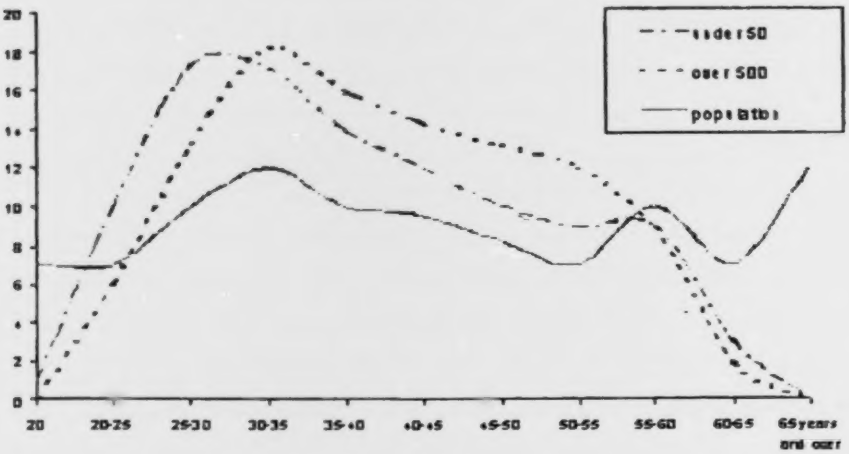


Diagram 9

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Adult Reskilling in Korea

Young-Hyun Lee
KRIVET

1. The Demands for Adult Training

Economic development

Over the past three decades, the Korean economy developed at a remarkably fast rate and the country came to be known as one of the Asian 'four tigers'. This high-growth period was characterized by substantial increases in investment in physical and human capital.

Korea began in the early 1960s as a typical labor-surplus economy with a scarce endowment of natural resources and a small domestic market. The government established economic growth as its primary goal and began to mobilize the nation's resources toward this end. During the initial stage of export promotion in the 1960s, unskilled and semi-skilled workers were rapidly mobilized into labor-intensive manufacturing industries such as textiles, footwear and garments. Using its abundant supply of labor, Korea achieved an extremely rapid economic expansion.

During the 1970s, the Korean government began to undertake a fundamental structural change towards the development of heavy- chemical industries. The government used commercial loans through the nationalized banks to reward companies conforming to state policies. After the early 1970s these 'policy loans' incentives were provided to firms to invest in state-targeted heavy manufacturing industries. In response to such growth-minded policies, these firms expanded their economic activities, most of them following strategies based heavily on low product costs.

By the 1990s, a shift towards more technologically advanced products was underway, and high-technology and service industries were able to compete successfully with industries of more developed economies.

From 1970 to 1999, the labor force in Korea more than doubled from 10 million to 21 million. The labor force participation rate increased from 47 per cent to 60.5 per cent.

Changes in the manner of employment

The rapid advancement of new technologies and the globalization of trade and labor markets are having a significant impact on the nature of work, the way it is organized and the skills it requires. These changes comprise the growth of the service sector, including a shift to casual or part-time work; occupational change and the emergence of new occu- pations. During the rapid industrialization in the last three decades, the proportion of high-skilled workers increased, while the proportion of unskilled workers declined.

The service sector now absorbs the largest proportion of the labor force. In 1999 about 68.6 per cent of the labor force was employed in services. The share of agriculture, forestry and fisheries continued to decrease from 50.5 per cent in 1970 to 11.6 per cent in 1999. The manufacturing sector contributed 19.9 per cent of the total employment in the country.

Overview of the labor market for adults

The pattern of labor force participation differs with age and gender. After 30 years of age male labor force participation declines gradually with age, with only half of the 60-64-age-group still in the labor force in 1999.

With the exception of men aged 60 to 64 years of age, there has been a decline in labor force participation for men in all age groups since 1990.

The situation for women is different. In sharp contrast to men, labor market participation for women in the 25-49-age-groups, and 60-64-age-group increased during the 1990s. Women's labor force participation in 1999 reached a peak of 63.0 per cent in the 40-49-age-group, followed by 60.8 per cent in the 20-24-age-group.

The women's labor force participation rate is 'M' -shaped.

〈Table 1〉 Employment trend, by age

Unit : %

Age	1990			1999		
	Total	Male	Female	Total	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0
15-19	3.2	2.1	4.8	1.8	1.4	2.2
20-24	10.4	6.4	16.2	7.3	4.3	11.6
25-29	14.0	16.1	11.2	12.4	12.8	11.9
30-39	27.9	30.7	23.8	28.9	31.7	24.8
40-49	21.6	22.3	20.7	25.0	25.5	24.4
50-59	15.7	15.9	15.4	14.7	15.1	14.1
60+	7.2	6.5	7.9	9.9	9.2	11.0

Source : National Statistical Office 2000 *Annual report on the economically active population survey.*

〈Table 2〉 Age profile of the Korean workforce

Aged 15 to over 55 by industry sector, 1998 (per cent)

Industry sector	Age in years					
	15-19	20-24	25-34	35-44	45-54	55 +
Agriculture & Fishing	0.3	1.2	5.5	15.7	20.5	56.8
Mining	-	5	10	40	35	10
Manufacturing	1.7	7.7	32	35.2	16	7.4
Electricity, gas & water supply	-	6.6		34.4	21.3	8.2
Construction	0.8	5.7	30.3	33.6	19.8	9.8
Wholesale & retail trade	2.4	0.9	31.9	33.9	18.7	12.2
Restaurants & hotels	4.7	8.7	24.3	24.9	26.2	11.2
Transport & storage. Communication	0.6	4.8	25.8	35.2	23.4	10.2
Finance & insurance	1.4	10.1	31.2	21.4	14.7	20.9
Real estate & business services	1.3	10.5	31.2	21.4	14.7	20.9
Other community services	1.7	10.5	29.5	28	17.4	12.9
All industries	1.8	7.4	26.5	30	18	16.3

Source : National Statistical Office 1999, *Economically active population.*

The ageing population

The other factor which is important in gauging the nation's skill development needs is the likely change in the demographic structure of the population and the possible impact such change will have on continuing education and training.

The workforce of Korea is ageing. In 1990, 54 per cent of the population was aged 25 and over. By 1998 the percentage in this group had increased to 61.8 per cent. Population projections indicate that by 2010 the percentage will have risen to 67 per cent. By 2020 more than 69 per cent of the population are likely to be over 25 years of age.

The change in the demographic structure of the population will have tremendous ramifications for Korea's skill formation policies if Korea is to meet its changing skill requirements. There will need to be a shift from vocational secondary education, entry-level training and further education for young people towards a greater proportion of retraining and reskilling occurring amongst adults.

2. Adult Education and Training

The implementation of the Second Educational Reform (including vocational education reform) Program proposed by PCER(Presidential Commission for Education Reform) and the enactment of the *act on promoting workers' vocational training* an integral part of education and training.

The vocational education reforms proposed by PCER include:

- transformation of higher education institutes into lifelong educational institutions for people of all ages
- expansion of education opportunities for the employed
- building a foundation for lifelong vocational education

The *act on promoting workers' vocational training* includes:

- government financial support for employers who implement vocational training programs
- government support for employees who make an effort to develop their job skills
- government support for the unemployed who want to undertake training for re-employment

Various measures have been undertaken to implement the reforms to establish a lifelong learning society. The legal foundation for 'the era of open and continuing education' has been prepared. The legislation on the Credit Bank System in 1996 was enacted to allow part-time registration in colleges on a on trial base.

Programs have been introduced to expand opportunities for employed workers to continue to study in higher education institutes. Polytechnic universities provide open and flexible curriculum and class schedules and are open to employed adults. Priority in selection is given to persons with experience in industry. The technical colleges (universities) operated by companies are under review to facilitate their being recognized as formal higher education institutes. In order to encourage workers to upgrade their knowledge and skills, the government enacted the *act on promoting workers' vocational training*. As a result, the number of workers trained has increased since the implementation of the new training policy. In addition, most enterprise training schemes include 'advanced (upgrading) courses' instead of basic training as tended to be the case under the levy system.

Adults in post-secondary vocational education

The enrollment rate of students in post-secondary educational institutions is very high in Korea. As of 1999, about 63.7 per cent of the age group were enrolled in higher educational institutions.

The participation rate of adults in post-secondary vocational education is low. Only 9.1 per cent of junior college students and 19.7 per cent of polytechnic university students are aged over 25 years old (Table 3).

〈Table 3〉 Participation rate of adults in post-secondary vocational education

Unit:%

	1985	1990	1995	1997	1999
Junior college	5.5	4	5	7.3	9.1
University of education	17.7	17.3	7.3	10.1	12.5
College and university	10	12.3	10	10.1	11.7
Air & correspondence University	73	60.4	83.1	70	87.4
Polytechnic university	50	32.6	22.3	27.2	19.7
Total	28.6	17.8	24.6	22.7	33.5

Source : Ministry of Education 1999, *Statistical yearbook of education.*

However, the participation of adults in formal education in Korea is increasing. In 1999, students aged over 25 in higher educational institutes accounted for 33.5 per cent of all students in higher education compared to 17.8 per cent in 1990.

Participation of adults in VET programs

There are little data on the participation of adults in vocational education and training in Korea. The most reliable data existing in Korea are from the social statistics survey conducted by the National Statistics Survey in 1996.

According to the survey, the participation rate of people aged over 15 in lifelong learning (workplace education, learning at private institutes, liberal art education, job training, learning through TV and radio and others) is 17.37 per cent. Overall, people who are young and male are more likely to take lifelong learning than if they are old and female.

In the survey, adult training is categorized into workplace learning and job training. The participation rate of people in workplace learning was 9.1 per cent and in job training was 2.24 per cent. Overall, more men participated in education and training. People who are male and young are more likely to participate in workplace education.

〈Table 4〉 Annual participation rate in adult learning programs, age and gender, 1996

	Partici-pation rate	Work Place Training	Learning at institutes	Cultural arts Program	Job Training	Mass-Media Lectures	Others
Total	17.37	9.08	3.47	3.13	2.24	3.79	0.38
Age							
15-19	19.36	10.79	7.77	2.06	1.43	2.19	0.15
20-24	24.83	13.51	10.80	2.81	1.96	3.93	0.28
25-29	25.69	15.29	8.01	3.13	1.57	5.47	0.50
30-34	22.76	13.36	3.87	4.3	1.72	5.61	0.61
35-39	20.62	11.35	2.95	4.28	2.12	4.80	0.55
40-44	17.16	8.23	1.90	4.00	2.52	3.87	0.43
45-49	15.79	7.44	1.58	3.19	3.27	3.70	0.46
50-54	12.47	5.64	1.14	2.40	2.87	2.97	0.26
55-59	10.27	4.03	0.39	2.33	3.26	2.14	0.15
60-64	8.61	2.37	0.26	1.81	3.45	1.87	0.15
65+	3.43	0.42	0.11	1.20	1.25	0.68	0.07
Gender							
Men	21.62	13.18	3.35	2.45	3.73	3.78	0.42
Women	13.49	5.34	3.58	3.74	0.88	3.79	0.35

Source : National Statistical Office 1996, *Report on the Social Statistics Survey*

Vocational training

The vocational training programs are classified into 'initial training', 'upgrade training', and 'job transfer training', depending on-the- curriculum, duration and trainee profiles. However, it does not make clear distinctions among the last two categories. In most cases, further training or in-service training is used to include both.

Training methods are classified into three categories: institutional training, on-the-job training and on-line (web-based) training.

As shown in table 5, further training of adults increased rapidly in the period of 1990-1999. Of those who participated in training programs, the proportion of adult workers taking upgrading training had increased from 24.8 per cent to 95.0 per cent in the period 1990-1999, while that of younger people taking initial training had decreased 75.2 per cent to 5.0 per cent in the same period.

〈Table 5〉 Proportion of people undertaking initial training and further training, 1990-2000

Unit: %

	Total	Initial training		Sub total	Upgrade T		Sub total
		public	private		public	private	
1990	44 852 (100.0)	45.4	29.8	75.2	0.7	24.1	24.8
1991	78 552 (100.0)	32.6	32.1	64.7	0.4	34.9	35.3
1992	132 608 (100.0)	17.6	30.9	48.5	2.1	49.4	51.5
1993	127 314 (100.0)	18.6	29.0	47.6	2.0	50.4	52.4
1994	159 979 (100.0)	2.0	44.0	46.0	5.2	48.8	54.0
1995	175 767 (100.0)	11.5	21.5	33.0	5.8	61.2	67.0
1996	170 427 (100.0)	10.2	19.5	29.7	11.3	59.0	70.3
1997	199 981 (100.0)	7.8	14.2	22.0	16.6	61.4	78.0
1998	750 137 (100.0)	4.0	5.5	9.5	14.7	75.8	90.5
1999	913 718 (100.0)	4.0	1.0	5.0	9.0	86.0	95.0

Source : Ministry of Labor 2001, *The current status of vocational training programs*, 1991-1999.

Enterprise training

The Employment Insurance System (EIS) was established in July 1995 as a comprehensive system intended to reduce the risk of unemployment, the risk of losing income as a result of unemployment and the risk of skill obsolescence. Consequently, the EIS comprises three components, namely employment security, vocational training and unemployment benefits.

The new vocational training system under EIS is not compulsory, but is an incentive system to induce voluntary training by providing financial support to employers and employees from the EIS fund.

The government enacted the *Act on promoting workers' vocational training in 1997* to establish a system for vocational competency development and to encourage enterprises to provide further training for the employed on a voluntary basis. The act has been in effect since January 1999.

According to the act, the Minister of Labor provides financial support to employers who implement vocational training programs. The Minister also support employees who make an effort to develop their vocational competency, i.e., undertaking the vocational training programs, wanting to acquire a certificate or undertaking programs designated in the Education Law. Governmental agencies or local autonomies may provide training for the unemployed.

Large firms are the main beneficiaries of the training programs for the employed. As shown in table 6, in 199, the participation rate of firms with less than 150 workers in in-plant vocational training was negligible, while it came close to 600 per cent in the case of firms with over 1000 workers. This high participation rate is explained by the fact that firms may claim support more than once over a given period of time. Less than 3 per cent of those employed in small firms received in-plant training, compared with 39.8 per cent in the case of large firms. Other programs of training for the employed are mainly used by large firms.

⟨Table 6⟩ Beneficiaries of in-plant vocational training programs, by firm size, 2000

Unit: %

	Firm size (number of workers)			
	Total	Less than 150	150-1000	1000+
Subsidized firms	100 (43 511)	70.0	22.9	7.1
Firms paying contributions	100 (601 394)	94.7	0.8	0.1
Firmsi¯ participation rate	7.2	5.4	212.6	581.4
Subsidized workers	100 (781 408)	12.6	29.7	57.7
Insured workers	100(6 054 479)	59.0	20.8	18.7
Workers' participation rate	12.9	2.8	18.4	39.8
Amount of subsidized	100 (82 764 007)	14.0	32.1	53.8

Note : Construction is dealt with separately given that special contribution rules, not based on firm size, apply to firms in this sector, but not shown in the table. In the section of firms paying contributions, construction contributed 4.5 per cent. And in the section of insured workers, construction accounted for 1. 6 per cent.

3. Participation of Adults in Retraining and Reskilling

- Results of a survey -

Training Experience Survey of Workers

A Training Experience Survey of 1029 employees conducted by KRIVET in July-August 2000. There are five age group categories: 24 years old or less, 25-34, 35-44, 45-54, and 55 years old or more.

The sample size was weighted to reflect the present male to female employee ratio (currently approximately 3:1) in the labor market. This accounts for a slight margin of error when calculating category totals or percentages.

According to the results of the survey, a majority of workers (about 66.3 per cent) received training of a some sort during the previous 12 months.

〈Table 7〉 **Participation Rate for Adult Retraining and Reskilling**

Unit : %

Age	Total	Less Than 24	25-34	35-44	45-54	More than 55
Respondent	1029	76	652	240	58	3
Participant	682	47	428	165	41	1
Participation Rate	66.3	61.8	65.6	68.8	70.7	33.3

About 37.7 per cent of those took a course in job upgrading training, 34.2 per cent in training in corporate culture training, 24.2 per cent in training for target group, 18.7 per cent in computer literacy training, and 5.2 per cent in education for internationalization.

〈Table 8〉 **Workers receiving training during the previous 12 months, by course and sex**

	Total	Men	Women
Training for target group	24.2 (353)	25.5	22.2
Job-upgrading training	37.7(432)	41.1	32.6
Computer literacy training	18.7(256)	20.2	16.3
Internationalization	5.2(7.3)	7.1	2.3
Corporate culture training	34.2(398)	36.3	31

Overall, workers who are male, young, and with higher educational qualifications are more likely to receive training than if they are female, old, and with lower educational qualifications. Men receive more training in generic knowledge and skills, and job-specific training than women, while receive more training in corporate culture than men.

In the case of job-upgrading training, a greater proportion of men received training than women: 41 per cent as opposed to 32.6 per cent. The proportion of workers trained also rises as firm size increases: 26 per cent of employees in small firms (5-99 employees) received job-upgrading training, whereas 62. 9 per cent of employees in large firms with more than 1,000 employees received training.

Reasons for Undertaking Training

The reasons why adults in Korea participate in training are different from those of younger people. Previous research has reported that older people are more focused on upgrading knowledge and skills, while younger people are focused more on obtaining a qualification or promotion.

According to the survey of workers, the primary motivator of adults undertaking a training course was to meet requests by their supervisor or manager. This motivation is reflected in the high proportion of people in the age 25-34 age groups and 45-54 age groups. The second motivator was to be promoted or obtain a certificate, followed by interest and personal development. People in the age 35-44 age groups showed more interest in taking a training course in order to obtain a certificate or promotion, and men showed more interest in this area than women.

Outcome of training

The outcome of the training revealed that the relevance of training to qualification or promotion differs depending on age. The closer relationship between training and qualification or promotion is shown in the 35-44 age groups rather than in other groups, and men benefited from training for qualification or promotion more than women. However, training courses helped people of all ages acquire job-related knowledge and skills, or improve job performance.

〈Table 9〉 Reasons for undertaking training

	Total	Type A	Type B	Type C	Type D	Type E	Others	No Answer
Total	682	11.7	12.3	1.9	49.2	8.2	12	4.7
Age								
24	47	16.8	13.3	-	49.9	1.7	14.7	3.6
25-34	428	11.1	7.7	1.8	53.1	5.9	13.8	6.6
35-44	165	8.9	25	2.4	37.9	13.7	9.8	2.3
45-54	41	21	3.2	2.7	55.8	12.7	4.5	-
55	1	-	100	-	-	-	-	-
Gender								
Men	367	11.1	14.2	1.6	48	8.3	11.9	4.9
Women	315	12.9	8.7	2.3	51.3	8	12.2	4.4

Type A: self-motivated
Type B: labor-management agreement
Type C: for promotion or obtaining a certificate
Type D: requested by supervisors or managers
Type E: next-in line training

〈Table 10〉 Relevance of training courses

Unit: %

		Obtained Certificate	Obtained promotion	Acquired Knowledge and skills	Improved job performance
Total		18.3	26.3	72.8	81.9
Age	24 or less	23.9	14.1	-	-
	25-34	15.6	28.2	69.6	80.3
	35-44	27.3	30.4	78.6	84.3
	45-54	6.3	10.3	75.5	86.6
	55 +	-	-	100.0	100.0
Gender	Men	19.6	29.6	72.0	80.4
	Women	15.9	20.0	74.2	84.5

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The National Qualification System for Linking Schools and Workplace in Indonesia

Dr. Masriam Bukit

A. Introduction

Indonesia is a country made up of about 17,000 islands, stretching across some 3200 miles of Equatorial Ocean. It is situated in South East Asia. Approximately 81% of Indonesian territory is water. Indonesia is therefore known as a maritime nation.

Indonesia is the fourth most populous country after the People's Republic of China, India, and the United States. Indonesia had 200 million citizens, with 1.82% population growth, but it has decreased compared to the previous decade (1971-1980) which was 2.32%.

At present over 40% of the workforce have education levels which are less than completion of primary school; about 70% have not completed junior secondary school. These people work mainly in the informal sector of the economy. Many of Indonesian industries have operated satisfactorily on a low-skill, low-productivity, low-wages basis.

As the globalisation increases the competition between countries, Indonesia has made strong commitment on human resources development in all sectors. The government of Indonesia is aware that the improvement of Technical and Vocational Education and Training (TVET) is one governing factor in achieving the human resources quality.

Since 1999 Indonesia has decentralised the management and funding of programs to provincial and district levels. The policy is part of an overall reduction in the centralisation of power, also represents an effort to move cost to a different level of government. Decentralisation of TVET creates a series of interesting questions about the variation in programs that typically takes place and about equity effects when regions vary in their ability to support TVET.

B. Challenges of Technical and Vocational Education in Indonesia

In the year of 2020 the Indonesian economy will need to change and develop so that its enterprises can be competitive in the regional and global economy.

Indonesia will need to develop its resources carefully with a view to the long term.

The structural shift of the economy, particularly in labour force, science and work skills, generate numerous trends and challenges which turn affect the technical and vocational education system in Indonesia. Technical and vocational education gives priority to emphasize the preparation of students to enter the world of work.

This is achieved through the close involvement of industry in the setting of standards, the development of curriculum and in the policy management of curriculum and in the policy management of the system and provides an action plan to enhance that policy through the phased development of a competency based training system for Indonesia.

Within twenty years the educational background of the work force will have changed as a result of the decisions already taken. This will in turn change the expectation of young Indonesians and their parents. It is likely that Indonesia will follow the experience of many other countries where higher levels of education will be demanded by individuals and their families. Indonesia's road is towards high quality, high productivity and high technology production. It must extend to both goods and services. Such a road is built on a national skills base which is geared to industry needs and flexible to meet changes which will take place. Some of these changes will be the result of economic and demographic factors which are already evident and they have been an important background.

The broad directions for policy development in TVET have already been outlined in Ministerial statements. Figure 1 shows the outlines of the policy directions as the key policy shift in TVET in Indonesia.

C. Introduction of Competency Based Training System in TVET

As a response to globalisation and increased competition Indonesia has recently tried to strengthen "work-based" approaches within their TVET system, partly because traditional school-based TVET has always been criticised for being outdated and inconsistent with the demand of real work. In all countries there are frequent complaints from employers that the training resulting from public-supported TVET institutions is irrelevant to their actual needs and therefore it is the employers who should determine the content and methods of TVET.

The concept of competency based focuses on what is expected whenever an employee is in a work place rather than on the learning process. The design of CBT is directed at ensuring that the skill needs of industry and the practice of TVET are inextricable linked. It focuses on the importance of institutional links: links between industry and education, the economy and education, governments and education, labour market and training. To do this is a matter of establishing a new cultural order of educational practice.

CBT gives priority to 'outcomes' that industry clearly defines and education, in turn, provides services to industry. That is, education outcomes mirror industry requirement.

Figure 1. Key Policy Shift in TVET

	THE PAST		THE FUTURE
1	A supply-driven system based on a large social demand	➡	A demand-driven system guided by labour market signals.
2	A school-based system delivering 'diplomas' upon examination	➡	An education and training system delivering 'competencies' in accord with nationally recognised standards.
3	A school-based system with minimum flexibility in delivery	➡	An education and training system with multiple entry/exit point and flexible delivery
4	No official recognition of prior learning	➡	A system which explicitly recognise skills and 'competencies' wherever and however they are obtained.
5	A school-based system with a 'study-program' orientation	➡	An education and training system oriented towards officially recognised professions and trades.
6	Education and training focused on the formal sector.	➡	Education and training both for the formal and informal sectors
7	Separation between education and training	➡	Full integration of education and training from a cognitive science perspective.
8	Centralised system of management	➡	Decentralised system of management.
9	Institution/organisations fully supported and run by the central government	➡	Self supporting and self managing institutions or organisations with partial support from the central government

The start of a competency based training system is the establishment of industry committees which work with vocational trainers to develop a set of skill standards which relate to the real needs of the workplace. These skills standards are graded so that they reflect the different levels of skills used in the workplace. The standards also specify the general work related skills which people need to be good workers, e.g. literacy, language, and cultural skills.

These skills standards are then used as the basis of curriculum development and assessment tools. They are also used to develop training materials which can be used both on-the-job and off-the job. Certificates are also based on the skill standards.

The skill standards will be of several types:

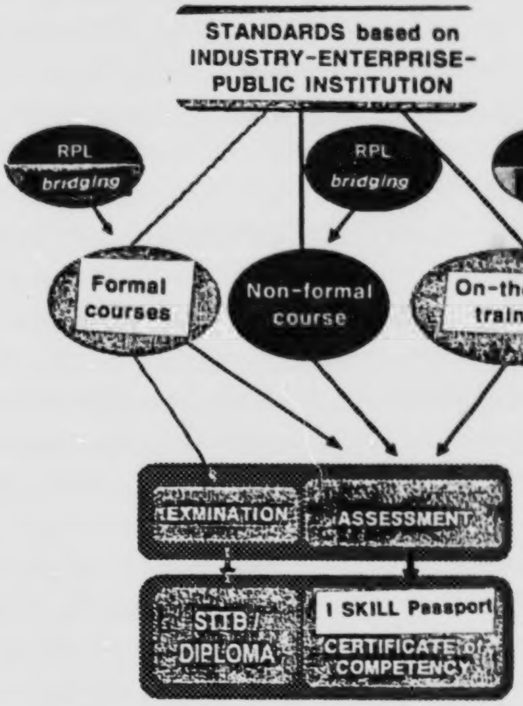
- *International standards* will apply in many industries because the industry concerned works within an international (including ASEAN) context.
- *National skill standards* will be required in most areas to reflect the workplace needs of Indonesian industry.
- *Regional or enterprise standards* will be needed where there are variations required to meet particular needs.
- *General skills* for working and adult life which are required for cottage industry activities and with particular emphasis on the skills required in living in remote locations.

In all cases, the standards will specify both the technical skills and the underpinning knowledge (in mathematics, languages, science, culture, etc.) required to be a competent worker in the field concerned. As much as possible, however, the study of these subjects would be set in a work related context.

C.1. Pathways to competency certificates

The development of competency standards will allow both the formal and the non-formal sectors and on the job training to contribute to recognised skill development. Figure 2 shows this in diagrammatic form. The aim is to link both formal and non-formal course through the common use of competency standards and assessment.

Figure 2. Pathways to competency certificates


STANDARDS based on
INDUSTRY-ENTERPRISE-
PUBLIC INSTITUTION
RPL
bridging
RPL
bridging
RPL
bridging
Formal courses
Non-formal course
On-the-job training
EXMINATION
ASSESSMENT
STIB / DIPLOMA
I SKILL Passport
CERTIFICATE of COMPETENCY

C.2 Academic Stream and Training Stream Pathways in TVET

In any education system, particularly vocational education, it is necessary to provide flexibility so that people who make one choice are not subsequently locked out of access to other courses.

At the post school level, also, it is necessary to provide flexibility so that students/workers can move up the "skills ladder as they need, and to access formal courses and short courses. In the same way students/workers may need to move from academic stream/theory based courses to practical skill courses. This needs to be made possible through bridging courses or bridging training, so that

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there is no need for people to "start from the beginning" when they want to extend they knowledge and skills.

Figure 3 shows in a diagram form, a flexible system which is built on three concepts:

- Articulation between courses
- Credit transfer from one course to another
- Recognition of prior learning (RPL) through the assessment of skills and knowledge of a candidate, regardless how the skill and knowledge they obtained.

Figure 3 also shows the concept of a spectrum of competency level. It would be for each industry to decide how many levels are necessary to meet its need. This is a different approach from the one in countries such as Australia or the United Kingdom where there are 8 and 5 levels predetermined for use by all industries although some have adopted addition levels within the structure. It will be necessary for industry groups to start developing competency standards from the " bottom up" and to pick a pragmatic approach.

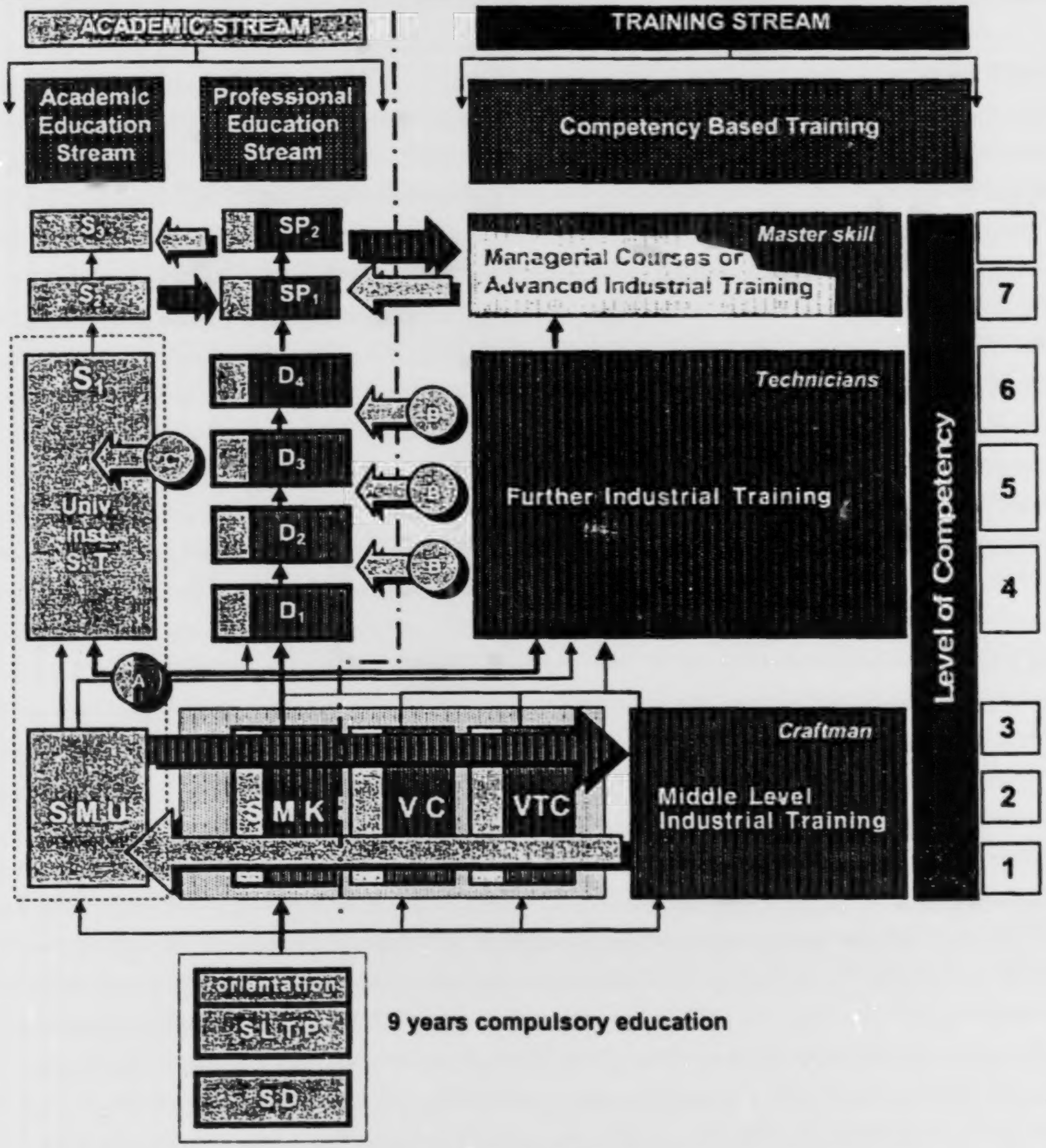
D. Certification System

D.1 Problems Associated with the Certification System

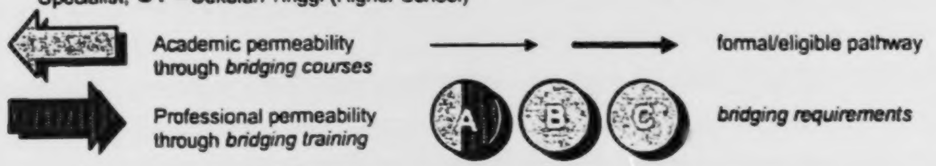
Certification system is an important part in the CBT system. There is a number of challenges which need to be overcome in the implementation of the certification system. These include:

a. The understanding about the certification system
b. The trade skills to be included in the certification systemc.
c. The parties which may adopt the certification systemd.
d. The assessment structure
e. The alternatives of the form of the competency certificatef.
f. The requirements for the system
g. The certification institution.

Figure 3. Academic Stream and Training Stream Pathways


ACADEMIC STREAM
TRAINING STREAM
Academic Education Stream
Professional Education Stream
Competency Based Training
S3
SP2
Master skill
Managerial Courses or Advanced Industrial Training
S2
SP1
S1
D4
Technicians
D3
C
B
Univ. Inst. S.T
D2
Further Industrial Training
D1
A
Level of Competency
7
6
5
4
3
2
1
Craftman
SMU
SMK
VC
VTC
Middle Level Industrial Training
orientation
SLTP
SD
9 years compulsory education

Note: SD - Sekolah Dasar (elementary School), **SLTP** - Sekolah Lanjutan Tingkat Pertama (Junior High School), **SMU** - Sekolah Menengah Umum (Senior High School), **SMK** - Sekolah Menengah Kejuruan (Senior Vocational High School), **VC** – Vocational Courses, **VTC**-Vocational Training Centre, **ITC** –Industrial Training Centre, **FITC** – Further Industrial Training Centre, **SP** – Specialist, **ST** – Sekolah Tinggi (Higher School)


Academic permeability through *bridging courses*
formal/eligible pathway
Professional permeability through *bridging training*
A
B
C
bridging requirements

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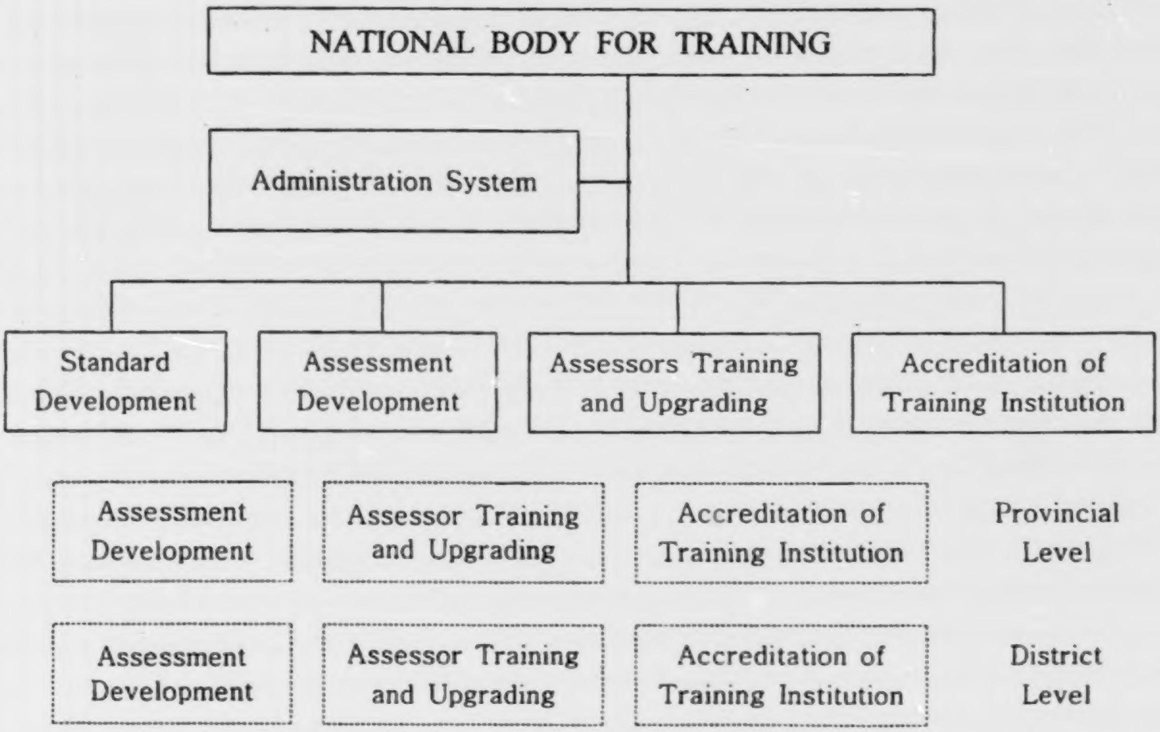
With regard to the standardization of training and certification system in Indonesia, the government will soon establish the National Body for Training.

The body has one administration system and four sub-commissions. Figure 4 shows the organisation structure of the National Body for Training. The functions of each of these may be described as follows:

1. The Administration System

The function of this department is to manage all the administrative affairs of the institution. This includes collecting and processing data, financial administration, enrolment, protests, and processing protests. This department must have a reliable information management system in order to support its main tasks and functions. A number of full time competent staff members will be needed to run the administration.


NATIONAL BODY FOR TRAINING
Administration System
Standard Development
Assessment Development
Assessors Training and Upgrading
Accreditation of Training Institution
Assessment Development
Assessor Training and Upgrading
Accreditation of Training Institution
Provincial Level
Assessment Development
Assessor Training and Upgrading
Accreditation of Training Institution
District Level

2. Standards Development Sub Commission

The function of this Sub Commission is to coordinate and at the same time also take part in the development of the competence standards, and to conduct monitoring and evaluation on the standards which have been determined so that they remain valid with regard to the advancement of science and technology taking place in industry.

They need to conduct periodic and scheduled meeting with all relevant parties in order to gain inputs/feed backs for the perfection of the standard of competence. Acknowledgement and recognition from similar bodies overseas or from international standardization institutions need to be sought using the Mutual Recognition Arrangement (MRA) through relevant professional associations.

3. Material Development and Assessment Procedure Sub Commission

This sub commission is in charge of the development/perfection of the material and assessment procedures and the issuance of the certificate. It is also in charge of the planning, assessment process, and evaluating the execution, which also includes the selection and scheduling of the assessors, and the execution of the assessment and the issuance of the certificate. The data and information of the execution of the assessment produced by this sub commission will then be processed by the information management system organised by the administration system.

4. Assessors Training and Up-grading Sub Commission

One of the requirements of the certification system in order to run well is the existence of assessors who are competent in their field. Assessors with such qualification may be obtained through a "Master Assessor Training Program"; they will then conduct "Assessor Training". The candidates of the assessor come from industry and training institution, they may also be experts in the field.

These assessors, having gone through a training program, and having been acknowledged to have fulfilled the requirements, will be awarded with certificates to become registered assessors who own registration numbers.

5. Accreditation of Training Providers Sub Commission

This sub commission is in charge of the development of the accreditation system, and the execution of good training by either public or private training institutions. The implementation of accreditation system should be conducted through monitoring and evaluation on the execution of the training, curriculum, facilities, equipment, and graduates using a set of criteria, instruments and procedures which are developed based on the Standard of Competence and Accreditation Systems or training institution applied in developed countries.

자유 토론

- **Effective Reskilling for Adults** / *Dr. Gisela Dybowski*

Q 독일에서의 성인재훈련 제도의 교훈은 무엇인가 ?

A 독일의 재훈련제도는 특정 skill을 위한 훈련 과정으로 되어 있으므로 다양한 skill을 위한 제도로 적용하기에는 한계가 있음. 학생의 60%가 dual system으로 훈련을 받고 있음. 따라서, 기초훈련에서 광범위하게 훈련 자격의 수준을 올리려고 함. 소외계층을 위해서 자격(증)이 낙후되면, 정부측 지원으로 항상 훈련을 추가로 받을 수 있도록 하고 있음.

Q 교사 재훈련 문제는 ?

A 2,350억 마르크를 정보통신 분야에 투자하여 e-learning 활성화.

- **Adult Reskilling in Korea** / *Dr. Young-hyun Lee*

Q 고용보험제도 도입의 배경은 ?

A 중소기업 훈련제공 장려가 목적이었음.

- **The National Qualification System for Liniking Schools and Workplace in Indonesia** / *Dr. Masriam Bukit*

Q 운영의 어려움은 무엇인가 ?

A 기술교육 강사훈련, 기술근로자 재교육 어려움.

Q 훈련기관의 질이 중요한데, 인가받지 못하는 훈련기관의 경우 어떻게 되는가?

A 인가받은 훈련기관의 목록을 발급, 제공하고 있으며, 인가받지 않은 기관에서도 언젠가 인가받을 수 있게 노력하여 훈련을 계속해야 함. 인가받지 않은 기관에 대하여는 연구보조금이 제공되지 않음.

Q 실업고에서의 학생에 대한 직업관련 정보 제공 방법과 정보에 의한 학생 교육 방법은 ?

A 인도네시아에 국립센터 3개가 있으며, 훈련센터에서 A급 교사도 센터에서 과정 이수 후 교육을 tracking 하여 이수증 발급. 교장도 훈련 이후의 활동을 보고하여 4년마다 평가받음. 4년이 임기인데, A급 평가를 받으면 재임 가능.

Ⅴ. 학교와 노동시장간의 연계를 위한 자격제도의 정비

1. 주제 발표

- **The National Qualification System for Linking Schools and Workplace** .... *Ms. Annie Bouder*
- **The Current Status of National Technical Qualification System in Korea** .... *Dr. Jeong-yoon Cho*

2. 국가 사례 발표

- **National Qualification System in Lao P.D.R.** .... *Mr. Silamay Sopraseuth*
- **National Skills Certification System in Malaysia** .... *Mr. Sahar Darusman*
- **Human Resources Training Programme in Malaysia** .... *Mr. Sahar Darusman*

3. 자유 토론

The National Qualification System for Linking Schools and Workplace

Marseille, November 9, 2001
Annie Bouder
Chargée de mission
Céreq

In this paper, I am attempting to concentrate on the three levels of concern indicated by the organisers when asking me to make a presentation : analyse current trends, key characteristics and future prospects of the national qualification system for linking schools and workplace. In doing so, I will give evidence from my country's experience and wherever possible, I will also make reference to other countries or other work.

I - Trends and Characteristics

In my understanding, speaking of linking schools and workplace can refer to two categories of concern in the management of national qualification systems :

- ensure a close link between actual occupational activity and the content design of qualifications' standards;
- develop alternative vocational education and training methods, combining work and class-room learning.

Since the very beginning of the 80's (when not earlier), a great majority of European countries have been developing their qualification systems along these two lines. Their achievements have been diverse, depending on the national context they were living with.

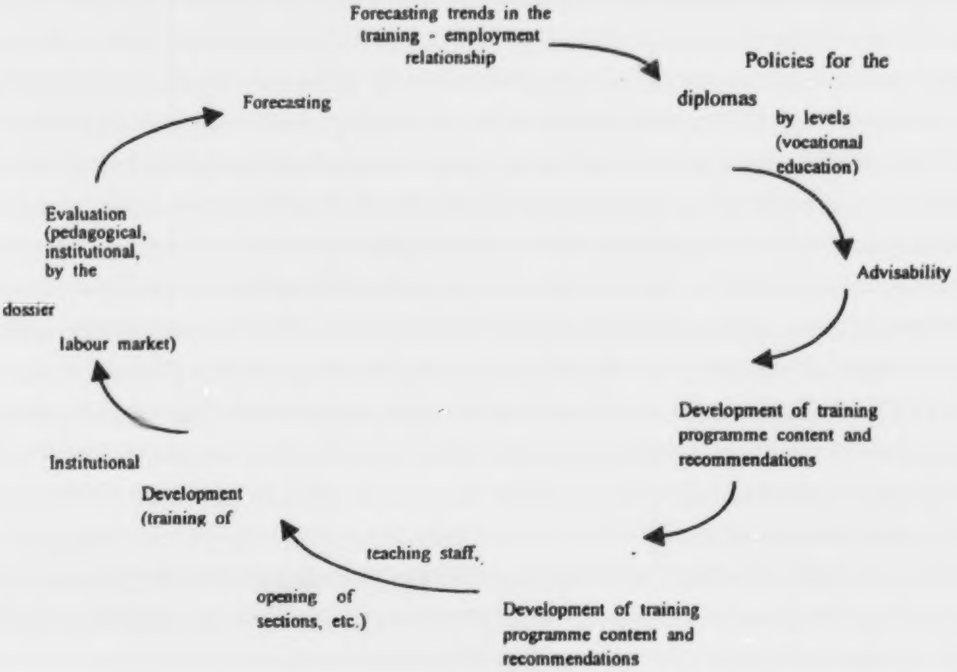
I-1. A close link between occupational activity and qualifications' standards

One of the most common solution adopted to construct vocational qualifications as closely related as possible to the reality of occupational activity, has been to involve social partners (employees and employers) in the design process of these qualifications. Those with the daily expertise in occupational activity should be most concerned and proactive. Germany has been the leading country in this respect, starting in the 60's. It was followed by a number of the other EU-countries : Austria, The Netherlands, Denmark. In a more recent past one can add to those the UK, Italy, Spain, and Portugal. A quite generalised solution therefore, even if the specifications that it takes differ between these countries according to the development stage of their social dialogue.

As for France, the education ministry - in charge of the design of vocational qualifications primarily for initial training - has put in place in 1972 sector specific bodies in charge of the creation, the updating and the possible cancellation of these qualifications. Modernised at the beginning of the 80's, these so-called consultative vocational commissions (commissions professionnelles consultatives - CPC) comprise :

* an equal number of representatives of employers and employees;
* representatives of the ministry and of Cereq;
* qualified persons belonging to either the public or private sector, selected by virtue of their occupational activities or their work. This group can include representatives of the teaching profession, of the chambers of commerce and industry, trade associations or chambers of agriculture.

A specific working procedure for these CPCs has been designed in the late 80's. It starts with an overall analysis of the foreseeable trends in the training-employment developments in the sector. Taking into account the general economy of the diploma system by the ministry of education, the CPC contracts out an advisability study, whose objective it is to inform its decision. This latter one is a "political" decision by the CPC, the next steps being rather "technical" ones. In case of a positive outcome of this study, a new qualification will be developed or improved. The first basic reference for that work is the "referentiel d'activite professionnelle" (RAP). This document defines the activities in which the people holding the qualification should be capable of engaging. It is based on an analysis of the activity and anticipates foreseeable developments in that activity. Out of its specifications, an assessment charta is determined, informing the evaluator on what to assess. It indicates the conditions and assessment indicators for the skills. Finally, a further document is drafted, that gives references to the training system, for it to support the acquisition of the required skills. The following chart pictures this process.


Forecasting trends in the training - employment relationship
Policies for the
diplomas
by levels (vocational education)
Advisability
Development of training programme content and recommendations
Development of training programme content and recommendations
teaching staff,
opening of sections, etc.)
Development (training of
Institutional
labour market)
dossier
Evaluation (pedagogical, institutional, by the
Forecasting

THE MAIN STEPS IN DESIGNING AND IMPLEMENTING TECHNICAL AND VOCATIONAL EDUCATION

One can see that the starting point of this whole process is a strong link between occupational activity and the design of the qualification standards : those standards emphasise definitions of occupational performances, from which requirements for training are then defined. Within the French training system, such an approach has been a substantial departure from the former situation, which, proceeding in the opposite direction, started with an academic and disciplinary definition of training programme content and considered occupational activity as the application of theoretical knowledge.

Because of its very nodal and negotiated character, I would like to put some emphasis on the activity frame of reference (referentiel d'activite professionnelle). Cereq but also other experts in the field are often asked to conduct the preliminary analyses leading to its final draft. To do so, enquiries and observations are made in enterprises of the sector concerned, mostly basing themselves on a functional analysis of the activity. Many other EU-countries have made use of the same kind of methodology to analyse the occupational activity prior to designing their standards : this is certainly true of the UK, followed at a later stage at least by Finland, Norway, Spain, Italy. Some dangers exist however with this kind of method, linked with a too focused, to static observation of the activity and leading to a too narrow definition of the qualification. I will come back to this point later.

In any case, this observation has led researchers in Cereq to develop in a recent past a home-made method for analysing the occupational activity, also with the purpose of counselling the CPCs in the design of the activity frame of reference. This method, called in French the study of the"emploi-type en dynamique"(ETED), takes some important distance with functional analysis and tries to the contrary to consider the characteristics of the direct environment of the activity observed in terms of work organisation, human resource management policies and innovation perspectives. What interests the analyst when making use of this method is the on-going dynamics of occupations, their strong links with other factors than just the"qualifications" of their holders. It is a whole area of sensible mobility that is as well uncovered. One other major characteristics of the ETED method is that it defines the actual and the potential (in dynamic) occupational activity in a dialogue with all levels of organisational and decisional groups in enterprises having very diverse characteristics.

This last point (about the necessary dialogue) is one that has become most important in the recent discussions about qualifications. These are as much a product of negotiation that they are an actual proof of competence. Qualifications are not an independent social object and there is no one best qualification. It must be negotiated at all stages of its inception and this has proved true not only in France but in all other EU-countries. When wanting to reform a system of qualifications, much more time needs to be devoted to convincing the various stakeholders of the strategic appropriateness and workability of a new one, than to actually reflect on how to best picture the need for "different" competencies in new standards. This has certainly be true of the UK NVQ-reform, but it is also contributing to the slower development of the Spanish one and to the heaviness of the Italian evolutions. The strength of the German system being that they keep up with the basics of their social agreement on qualifications, reforming their system only from the inside.

Coming back to France, it is important to know that the processes put in place by the Ministry of Education for the design of its qualifications, has spilled over to other ministries delivering their own qualifications. The setting-up of consultative commissions pulling together the main stakeholders, as well as the drafting of a frame of reference for the occupational activities concerned ("referentiels d'activite") ensure also there the greatest possible proximity between workplace and training bodies (or schools). This is the case for the Employment Ministry, the Ministry of Agriculture, of Youth and Sports. The Ministry for Health and Social Affairs will soon also have finalised these organisational arrangements for its qualifications.

While these evolutions are taking place out of the conviction that they are best guaranteeing the quality, the appropriateness and the social acceptance of qualifications, they are also being strongly encouraged by the future law on "social modernisation", that should be passed at the end of this year. With this law, a new national directory managed by a new national commission for certifications will be created. A condition for qualifications issued by public bodies to automatically enter this directory, is that they should be designed with the double methodology of the CPC and of the"referentiel d'activite". I will come back to this new law later.

To close this first part, I will only stress again my two main points :

- to be close to the workplace, qualifications need to be negotiated with a direct involvement of social partners;
- for them to be adequate for use on the workplace, their inceptors must start by analysing the occupational activities themselves and in their dynamics.

I-2. Combining work and classroom learning

As a second mean to bring schools and workplace closer together, I chose to mention the various arrangements combining work and classroom learning. The question here is not so much to detail these arrangements, but to see in how far they might impact or be impacted by the qualification system.

Apprenticeship is certainly one of the most common way to alternate work and classroom. In terms of qualifications, Germany again and certainly also Austria have built theirs purposefully for managing the dual system of training. There exist no alternative to them. Qualification, work and classroom are constructed together. There is no extra need to combine them. It is a package. The closest France come to that, is through the design of its Baccalaureat Professionnel (vocational Baccalaureat). In a much reduced manner than in Germany, the design of this qualification and of its standards includes compulsory periods of training in enterprise that are assessed in their own right and whose notation has equal value.

To come back to apprenticeship, it has a different character in the other countries. In terms of qualification, one of the management difficulties it induces lies with the fact that in most systems, one tries to deliver the same qualification whether learning only in school or in both school and workplace. This is the case in France and in the UK, to name only those two countries. This raises important assessment issues : having the same standards to comply with, are assessors able to certify their attainment in an equal manner whether measuring it out of school learning or out of work practice ? Would they really be measuring the same thing ? In this way, the structure of the qualification can really impact the linkages between work and classrooms : the closest the standards from the particular workplace activity, the more difficult to attain it for those who are learning in a classroom situation. And vice-versa : the more academic, school-based learning in the design of a qualification, the more difficult for those who have mainly invested in workplace learning, especially when having done so because of uneasiness with school teaching.

These comments raise many scientific, theoretical issues. In managerial terms, they might also explain some of the non achievements. Could it be that the assessment phase of qualifications could become a learning period to improve the content, the standards of qualifications? Pulling on both school-based and work-based acquisition of qualifications? Whatever the answers, I am convinced that there should be direct links between structure of qualifications and modes of learning. That these links should be iterative. And that in this way theoretical and scientific issues are being raised, that should include the cognitive sciences.

The majority of the comments made in this part of the presentation are essentially geared towards initial vocational training, towards the acquisition of a first qualification. Maybe was that induced by the use of the word "schools" in the brief I received. But in a way, it was ineluctable : qualifications (whether vocational or general) have traditionally been developed to symbolise the end of an up-bringing phase. When speaking of future prospects, this can not hold anymore.

II - Future Prospects

A general view has been widely spread and is now taken for granted, that in future years starting today, people will want and need to gain more and more certified qualifications, and that it is vital to be preparing our systems for that. This preparation has partly started and there are two issues about it that I would like to discuss in more details. One has to do with the design of qualification frameworks and the other one with the accreditation of prior experience.

II-1. Towards one qualification system or a framework?

In most our countries, we have diversified the nature of qualifications. Adding to those generally provided by the initial vocational training system, these other qualifications are managed either by other public bodies or ministries, by private bodies (as in Korea, for example) or by the social partners in their own right (as is the case in France), etc. The links that these other qualifications establish between workplace and teaching (training) is very varied. In France for example there is a clear difference in qualifications targeted to further training. Some are geared towards those needing to gain full qualification (mostly unemployed) and those developed for employees looking for some "adaptation" qualifications. The first ones, targeted to unemployed people are most often the qualifications managed by the Employment Ministry. As I mentioned it earlier, this Ministry has adapted the methodology of the Ministry of Education, allying consultative commissions with social partners and analysis of occupational activities. Its qualifications open an occupational field to the individual, a broader perspective into several occupations. The second kind of further training qualifications, are those developed by the social partners of the various economic sectors. These so-called certificates of occupational qualification (CQP) generally come as a complement to basic qualifications and are mostly a mean of supporting the adaptation of employees to work evolutions. Their relationship with the workplace is of course immediate. It is instrumentalised to specific work situations. Inside the same economic sector, these Certificates are recognised nationally. The opportunity is of course always open, also in further training activities, to aim at one of the qualifications of the Ministry of Education.

With these various alternatives in mind, and in the perspective of the announced, enforced need for an incremental accumulation of certified qualifications, an issue is coming up strongly : does this imply that a single qualification system must be put in place, that would serve both initial and further qualification purposes? With which degree of instrumentalisation to the labour market? Under which conditions would this supports or hinders progression? Or should one consider building a framework comprising all the existing qualifications and linking them to one another according to criteria still needing to be defined ? Inside this framework, each of the qualifications would keep its more or less differentiated links between teaching and workplace learning.

In fact, the new French law that should be voted coming December is intending to set-up a so-called national Directory of certifications (qualifications) that would more or less fulfil the role of this framework. A national certification commission would have as a responsibility to analyse qualifications and to position them to one another both in terms of level as in terms of specific, targeted or general content.

But France is not the only country starting to launch such an exercise. We are not even sure of its feasibility - its technical but also its social feasibility in terms of acceptability. England started working at her framework several years ago, but not being sure as to whether it was constructing a real framework or just an equating one whose use would then be limited compared to the ambition such framework could have. Spain, The Netherlands are on the same route. The OECD itself, with its education committee, has launched an activity concerning these qualification frameworks, working with up to 10 countries to study the way in which they can help supporting Life Long Learning. I know that Korea through KRIVET is part of this group.

Personally, I do not believe that the answers to these various issues are already standing.

Because, and this is a very personal opinion, they are not the real ones. Creating a single system or a framework are managerial and technical matters. To put the focus of the debates at this level is a way of not answering the basic concerns.

It seems to me that what is at stake in the coming (but quite immediate) future is to decide whether vocational qualifications are going to be instrumentalised to the labour market or whether they will be used for an overall personal and human resource development policy.

The very title of this conference seems to go optimistically in this last direction"National strategies for developing human resources through TVET". It gives a sense of joint responsibility and commitment to a common objective. A macro equilibrium of human resources is looked for, not a micro management at enterprise level, serving the immediate interest of the latter. In France, this debate has taken the form of an antagonistic discussion around the concepts "competence" and "qualification". The first ones being operational, immediately "consumable", while the second are comprehensive, long-term and mobility orientated. Competencies are all that is needed for an internal labour market in an enterprise, at most at sectoral level. Qualifications give a broader perspective in terms of mobility, they allow the individual to compete on the external labour market.

In this context, the setting-up of a framework must be conceived in the perspective of progression for the individual. It can of course also serve other purposes such as easier management, economy of scale, transparency ··· But to support a strategy for developing human resources, those last purposes are only secondary. And to come back to the theme of my presentation, in terms of bringing closer workplace and teaching/training, I mean that building a "progression" framework will help understanding that this closeness must not be too narrow and not in all circumstances.

There is a second great advantage to have such a framework, still in terms of progression for the individual. It has to do with the possibility that the linking of all qualifications provides for positioning individuals in the process of accrediting their past experience.

II-2. Recognising the qualifying effect of experience

It seems to me that there is no better solution to support the role of qualifications in bringing workplace and learning closer to one another, than to formalise the recognition of the qualifications generated at workplaces. Several countries have started setting-up such procedures of accreditation of prior experience. Always with the objective to verify that an individual's experience comply with the qualification standards. In such cases, parts or whole qualifications are delivered. An other variant is that through recognition of experience, access to higher education is being granted. The UK has a procedure called APL (Accreditation of Prior Learning), France has launched in 1985 and then in 1992 the Validation des Acquis Professionnels (VAP - Validating occupational experience), Portugal, Spain, Italy have already started along the same lines. In terms of individual progression, these procedures are a real social progress. They are also a way to double check, that the qualification standards that have been developed correspond to individuals' daily working lives. They certainly confirm the solidity of these standards. But for our purpose today, they are also a challenge.

Then, what about "inverting the stocking". Trying to work out what needs to be changed in the standards so that they better reflect the actual creation of qualifications taking place. How can a qualification be readjusted, its standards adapted, through the processes of recognition of experience? To my knowledge, no one has been working around these issues. But this is not primarily a political or organisational issue. It is for first a scientific, theoretical one. Despite having personally no sound knowledge in this area, the little I perceived from the cognitive sciences inclines me to wanting to apply them to this group of issues. Technical, organisational and political discussions on the role and nature of qualifications would gain a lot integrating cognitive analysis of occupational activity.

As a matter of conclusion, I can say that there are none. The idea I had of my presentation was that it should help open a debate and generate questions. I hope it did.

The Current Status of National Technical Qualification System in Korea

KRIVET, associate research fellow
Jeong-yoon, Cho

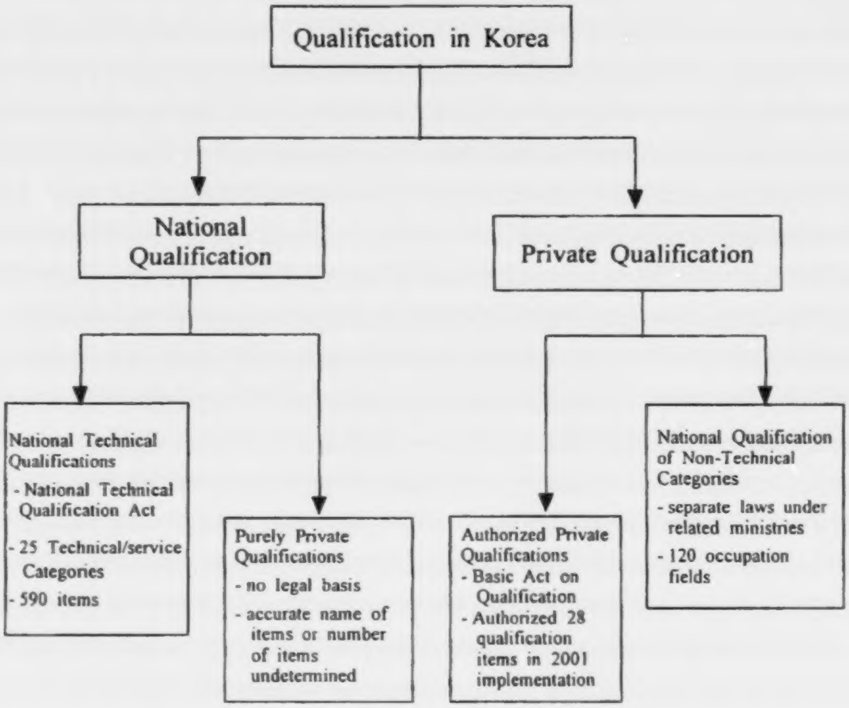
1. The Structure of Korean Qualification System

The qualification system in Korea can be divided into national qualification and private qualification as shown in Figure I-1. National qualification consists of national technical qualifications(NTQ) and other non-technical national qualifications. Private qualification(the term of 'private' in this context can be understood as meaning 'voluntary') also comprises two parts, authorized and unauthorized.

2. Enactment of National Technical Qualification

1) Background

There has been some criticism about the technical qualification system prior to the adoption of the NTQ Act. First, the lack of coherence between the technical qualifications issued by various government ministries and laws according to their particular objectives limits the development of qualified technical workers. Second, the criteria for national technical qualification are much too complicated and unbalanced, thereby reducing its credibility. Third, the various qualifications authorized by different sources, many of them overlapping in their content, are not being accorded inter-changeability, therefore leading to a waste of time and resources of not only the qualification system operators, but also of those taking the tests. Fourth, the near absence of preferential treatment for certificate holders has worked to deter the incentives of workers to acquire technical skills. Fifth, due to the unorganized system of qualification it has been impossible to keep technical education and vocational training in line with the needs of the industry.


Qualification in Korea
National Qualification
Private Qualification
National Technical Qualifications
- National Technical Qualification Act
- 25 Technical/service Categories
- 590 items
Purely Private Qualifications
- no legal basis
- accurate name of items or number of items undetermined
Authorized Private Qualifications
- Basic Act on Qualification
- Authorized 28 qualification items in 2001 implementation
National Qualification of Non-Technical Categories
- separate laws under related ministries
- 120 occupation fields

[Figure 1-1] Qualification System in Korea

2) Objective

By establishing an evaluation scheme of skills and the level of skills, not only may the capabilities of technicians and craftsmen be enhanced, but their social recognition and credibility will also be increased.

The social positions of technicians and the utilization of their skills will be enhanced through the spread of preferential treatment for skilled workers who have obtained qualification certificates. Another purpose is to improve technical education and the vocational training system by way of responding to the needs

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of the industry, with these qualified workers as the link. In addition, greater efficiency can be achieved in the management and operation of what is now a sporadic and arbitrary qualification system, which may be conducive to ensuring better and more capable technical workers and also providing manpower support to the national advanced industrialization policy.

3) Basic Principles

Through this system, human resources in the science and technology field, essential in an industrial society, will be classified into three categories: (1) scientists(the so-called brain power), (2) on-site technicians, who are in charge of technical matters in the actual workplace, and (3) craftsmen, whose main duties are manufacturing, assembling, operating, repairing and maintenance. Furthermore, on-site technical workers such as technicians and craftsmen may also achieve equal social, economic status with doctorate-level academics once they obtain certificates in the highest levels of their respective qualification tests. This is designed to enhance the morale and self-esteem of technicians and craftsmen and to upgrade the social positions of technicians and craftsmen.

4) Functions

The qualification system in Korea aims to assess and evaluate the degree of achievement towards a certain goal. Its main functions are to conduct an evaluation of (a)technical skills education and training, (b)special abilities imperative in an industrial society. The Korean qualification system also provides invaluable feedback regarding the qualfication system in general and its future direction, which lead to the enhancement of workers' skills. Policy-wise it controls the flow of the industrial manpower supply.

During the twenty years of the implementation of national technical qualification system(NTQS), its goal of establishing a working model of certification by integrating into one the scattered standards and criteria has been accomplished. The current impetus must be given to heightening the credibility of certificates and making them more suitable for practical use. The functions of NTQ could be suggested as follows; First, individual skills and capabilities should be evaluated according to standard criteria, making possible the supplying of skilled workers as well as providing a direction for human resources development institutions. The economic and social status of technicians will also rise through increased recognition of their abilities. Second, the qualification system must provide a link between the supply and demand of skilled workers, facilitating the smooth flow of labor. Third, it acts as a guideline regarding employment, pay, promotion to individuals and standards for human resources management, especially in an industrial society. Fourth, qualified and skilled workers can be secured and further utilized, contributing to increased productivity and industrial development.

5) Establishment Direction of Qualification Items

At the time of the enactment of the NTQ Act, the main consideration was given to skills related to heavy industry, such as machinery, metal, and chemical engineering, since the basic principle was economic development through the support of heavy industry. The technical education and vocational training policy was planned to suit this purpose, and an attempt was made to integrate the wide variety of certification systems prevalent before. An emphasis was put on making the items for qualification realistic and practical, able to bring about actual benefits to individuals and society.

The Class I and Class II Engineer items encompass a wider range of skills compared to Professional Engineers and are closely linked to formal education venues. The more specialized Professional Engineers are more suited to specific skills required on-site.

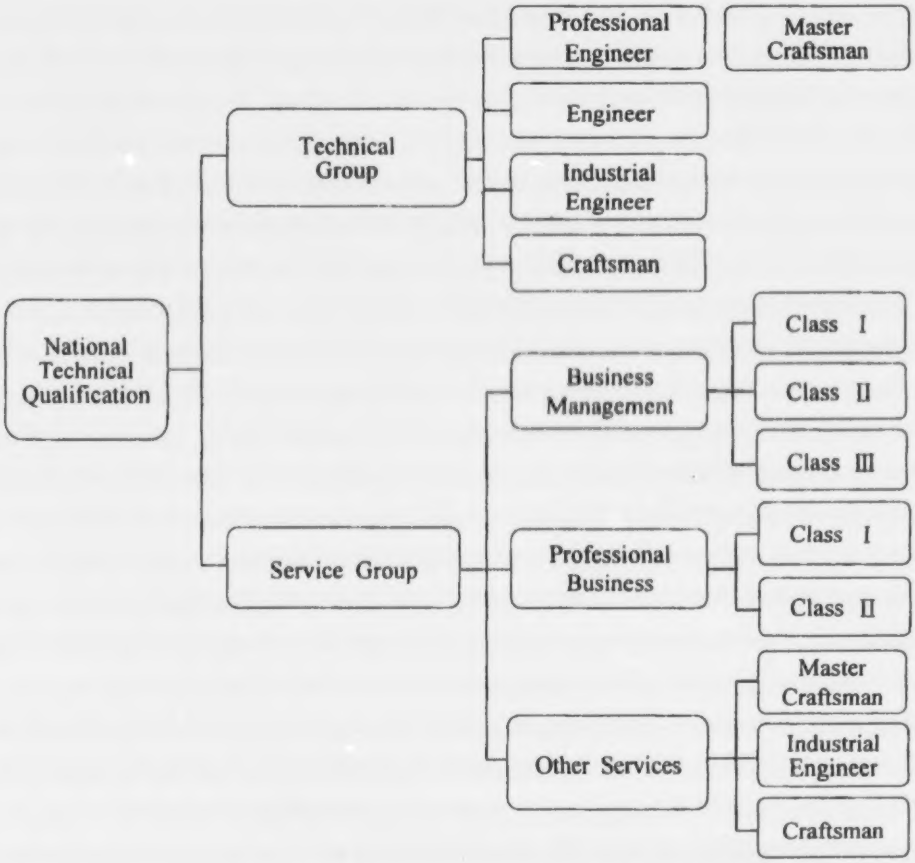
In the Craftsmen group, the range and level of skill expands as an individual reaches a higher rank.

The lower rank craftsmen are helped to learn simple crafts in order to receive qualification.

3. The Structure of National Technical Qualification System

1) Classification

As shown in Figure 3-1, the current national technical qualification system is classified into 5 different levels: Professional Engineer, Master Craftsman, Engineer, Industrial Engineer, and Craftsman. The Service group is divided into Business Management and Other Services. Business Management has 3 levels(geup) and the Other Services group item has under it the two levels of Master Craftsman and Craftsman in 2 fields of work.


Professional Engineer
Master Craftsman
Engineer
Technical Group
Industrial Engineer
Craftsman
National Technical Qualification
Class I
Business Management
Class II
Class III
Class I
Service Group
Professional Business
Class II
Master Craftsman
Other Services
Industrial Engineer
Craftsman

[Figure 3-1] Classification of National Technical Qualification

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2) Qualification Categories and items

There are 25 categories in the technical group including machinery, metal, chemical engineering and ceramics, electricity, electronics, communications, shipbuilding, aeronautics, civil engineering, architecture, textiles, mining resources, information processing, land development, agriculture and forestry, industrial design, energy, safety management, environment, applied industries, transportation, pottery, foods, sanitation and the business management categories under the service group.

Under the amendment of the Enforcement Decree there are 590 items of qualification, which is divided into 550 in the technology and skill group and 40 in the service group.

⟨Table 3-1⟩ Number of Qualification Items in the Technical Group of the NTQS

Grade Occupation Category	Total	Professional Engineer	Master Craftsman	Engineer	Industrial Engineer	Craftsman
1. Machinery	118	10	10	15	31	52
2. Metal	48	6	6	7	10	19
3. Chemical Engineering and Ceramics	20	5	1	4	5	5
4. Electricity	19	5	2	4	4	4
5. Electronics	13	3	1	3	3	3
6. Communications	20	1	1	4	7	7
7. Shipbuilding	9	3	-	1	1	4
8. Aeronautics	9	2	1	1	1	4
9. Civil Engineering	29	11	-	4	4	10
10. Construction	33	4	2	3	7	17
11. Textiles	30	6	2	4	9	9
12. Mining Resources	16	4	-	3	4	5
13. Information Processing	8	2	-	2	3	1
14. Land Development	11	3	-	3	3	2
15. Agriculture and Forestry	39	6	1	9	9	14
16. Ocean and Fisheries	20	4	-	8	5	3
17. Industrial Design	6	1	-	2	2	1
18. Energy	6	3	-	2	1	-
19. Safety Management	19	7	1	5	5	1
20. Environment	13	4	-	4	4	1
21. Applied Industry	39	6	-	11	8	14
22. Transportation	3	1	-	1	1	-
23. Pottery	22	-	1	-	4	17
Total	550	97	29	100	131	193

The service group is divided into business management, professional business and other services. The category of business management has under it 6 items: word processing, Korean/English shorthand, secretarial work, computer application, and computer accounting. The qualification levels in the Business Management field are classified into levels 1, 2, 3. The field of professional business has under it 3 items; job counselor, social survey analyst, and electronic commerce. This field are classified into level 1, 2. The total number of categories are shown in Table 3-2.

〈Table 3-2〉 Number of Qualification items in the Business Manage- ment (Service Group) of the NTQS Occupation category

Occupation category	Item	Class	Number
Business Management	Word Processing	1-3 geup	3
	Korean Shorthand	1-3 geup	3
	English Shorthand	1-3 geup	3
	Secretarial Work	1-3 geup	3
	Computer Applicability	1-3 geup	3
	Computer Accounting	1-3 geup	3
Professional Business	Job Counselor	1-2 geup	2
	Social Survey Analyst	1-2 geup	2
	Electronic Commerce	1-2 geup	2
Total			24

The other services under the service group, previously under the technical service category in the craftsman group, consists of the two fields of foods and sanitation, as is shown in Table 3-3. There are a total of 15 items, 4 in master craftsman, 1 in industrial engineer, and 11 in craftsman.

〈Table 3-3〉 Number of Qualification Items in the Other Services Category (Service Group) of the NTQS

Grade Occupation field	Master Craftsman	Industrial Engineer	Craftsman	Number
1. Foods	Cooking Baking	Cooking	Korean Cooking Western 〃 Chinese 〃 Japanese 〃 Swellfish 〃 Confectionary Pastry Bartender	11
2. Sanitation	Barber Beautician		Barber Beautician Laundry	5
Total	4	1	11	16

3) Certification Criteria

The criteria for certification under the NTQS are provided in the following(Table 3-4).

〈Table 3-4〉 NTQS Certification Criteria According to GradeGrade

Grade	Certification Criteria
Professional Engineer	Whether or not the applicant has the ability to plan, research, design, analyze, test, operate, construct, evaluate or guide and supervise these activities based on a high level of expert knowledge and field experience

(continued)

Grade	Certification Criteria
Master Craftsman	Whether or not the applicant has plenty of experience and skills in order to supervise, guide other workers, carry out on-site training, and act as a link between the management and production workers
Engineer	Whether or not the applicant has the ability to carry out skilled tasks such as design, base construction, and analysis based on engineering knowledge.
Industrial Engineer	Whether or not the applicant has the ability to carry out multi-skill tasks based on basic technical knowledge or experience
Craftsman	Whether or not the applicant has the ability to carry out task management duties such as produce, manufacture, operate, repair, and evaluate.

The certification criteria for business management qualification under the services group, whose testing is executed by KCCI, is as follows:

〈Table 3-5〉 Certification Criteria for Business Management (Service Group)

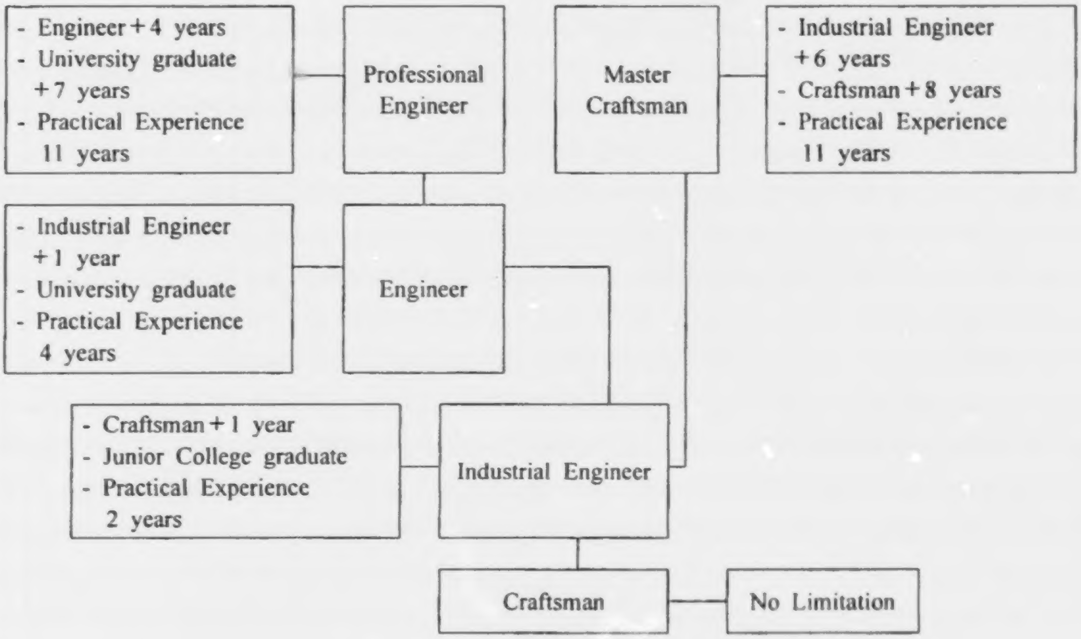
Name	Grade	Certification Criteria
Korean Shorthand	1 geup	Possessing expert-level Korean shorthand skills and the ability to carry out related duties with efficiency and accuracy
	2 geup	Possessing intermediate-level Korean shorthand skills and the ability to carry out related duties with efficiency and accuracy
	3 geup	Possessing beginner-level Korean shorthand skills and the ability to carry out related duties with efficiency and accuracy

(continued)

Name	Grade	Certification Criteria
English Shorthand	1 geup	Possessing expert-level English shorthand skills and the ability to carry out related duties with efficiency and accuracy
	2 geup	Possessing intermediate-level Korean shorthand skills and the ability to carry out related duties with efficiency and accuracy
	3 geup	Possessing beginner-level Korean shorthand skills and the ability to carry out related duties with efficiency and accuracy
Secretary	1 geup	Possessing expert knowledge on secretarial work and the ability to carry out related duties with efficiency and accuracy
	2 geup	Possessing general knowledge on secretarial work and the ability to carry out related duties with efficiency and accuracy
	3 geup	Possessing basic knowledge on secretarial work and the ability to carry out related duties with efficiency and accuracy
Word Processing	1 geup	Possessing expert-level word processing skills and the ability to carry out related duties with efficiency and accuracy
	2 geup	Possessing intermediate-level word processing skills and the ability to carry out related duties with efficiency and accuracy
	3 geup	Possessing beginner-level word processing skills and the ability to carry out related duties with efficiency and accuracy
Computer Applicability and Accounting	1 geup	Possessing expert-level computer skills and the ability to carry out related duties with efficiency and accuracy
	2 geup	Possessing intermediate-level computer skills and the ability to carry out related duties with efficiency and accuracy
	3 geup	Possessing beginner-level computer skills and the ability to carry out related duties with efficiency and accuracy

4) Eligibility for the Qualification Exam.

Figure 3-2 shows the application requirements under the Implemental Decree of the National Technical Qualification Act. For example, eligibility for the Professional Engineer qualification is given to individuals who have ①acquired qualification as an engineer, industrial engineer, or craftsman and worked in their fields for 4, 6, 8 years respectively, ②graduated from university or junior college and worked in the field of qualification application for 7 and 9 years respectively, ③completed training at the level of engineer or industrial engineer, ④had field experience for more than 7 or 9 years or 11 years without having proper formal education, and ⑤acquired an identical qualification and class in a foreign country.


- Engineer + 4 years
- University graduate + 7 years
- Practical Experience 11 years
Professional Engineer
Master Craftsman
- Industrial Engineer + 6 years
- Craftsman + 8 years
- Practical Experience 11 years
- Industrial Engineer + 1 year
- University graduate
- Practical Experience 4 years
Engineer
- Craftsman + 1 year
- Junior College graduate
- Practical Experience 2 years
Industrial Engineer
Craftsman
No Limitation

[Figure 3-2] Eligibility for National Technical Qualification

5) Certification Process

The certification procedures according to each technical qualification field is stipulated in Article 15 of the Implemental Decree. The certification process proceeds in the order of written exam., practical exam., and interview. Each stage of the exam. requires the passing of the previous stage, but if the practical exam. is in the form of a written exam., then both stages may occur within the same stage. The certification process of the technical group qualification is illustrated in Table 3-6.

Professional engineer qualification requires a written exam. and an interview, while the categories of Engineer, Master Craftsman, Industrial Engineer need to take a written and practical exam..

〈Table 3-6〉 Certification Procedures for the Technical Group

Qualification Type	Certification Procedure	
	Written Exam.	Interview or Practical Exam.
Professional Engineer	Short answers or essay	Oral interview
Master Craftsman	Multiple choice (1 answer out of 4 choices)	Actual performance test+ Written exam.
Engineer	Multiple choice (1 answer out of 4 choices)	Actual performance test+ Written exam.
Industrial Engineer	Multiple choice (1 answer out of 4 choices)	Actual performance test+ Written exam.
Craftsman	Multiple choice (1 answer out of 4 choices)	Actual performance test

The written exam. takes the form of essay-type and multiple-choice questions, with the Professional Engineer examinees given short answer and essay questions and others given multiple-choice questions.

The cutoff point is 60 out of 100 for professional engineers, master craftsmen, and craftsmen, while engineers and industrial engineers need to receive at least 40 points in each subject with an average higher than 60.

There are 4 types of practical exams: interview, actual performance, written answers, and combined.

The interview-type exam. applies only to the Professional Engineer class. Actual performance requires the examinee to use certain equipment and tools to design, manufacture, operate, repair, extract, analyze and inspect according to instructions. The written type refers to the short-answer type written exam., and the combined exam. consists of both actual performance and the written type. Qualification exams utilizing solely the written version are currently being transformed into combined or performance-type exams in order to enhance the practical skills of qualification acquirers.

The cutoff point for practical and interview exams is 60 out of 100 for the technical group qualification and Other Services qualification. The certification procedures for the Business Management field of the Service Group are shown in Table 3-7. Both written and practical exams are required in secretarial work and word processing, while other categories require only one of the two. It should be noted that although bookkeeping requires only a written exam., the actual exam. has questions requiring not only theoretical knowledge but actual ability, making the exam. closer to the combined type.

〈Table 3-7〉 The Certification Procedures of the Business Management Field (Service Group)

Qualification item	Certification Procedure
Secretary	Written exam. → Practical exam.
Word Processing	Written exam. → Practical exam.
Shorthand	Practical exam.

4. Administration of Certification Process

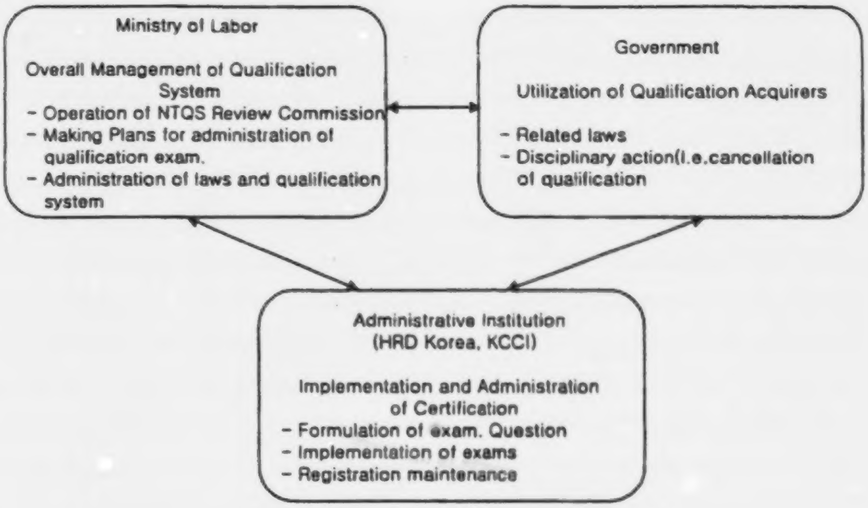
1) Current Operation

National technical qualification is currently under the control of 15 different government organizations, but the overall management is headed by the

Ministry of Labor under the NTQ Act. The undertaking of the formulation of exam. questions, the certification process, registration, and post-qualification education are commissioned to the Human Resources Development Service of Korea(HRD Korea) and KCCI under the Implementation Decree of the same Act. HRD Korea is in charge of the Other Services category in the Service Group as well as the Technical Group, while the KCCI deals with the Business Management field in the Service Group. The certification of active soldiers and military personnel are authorized by the Minister of Defense, and the registration, certification, reports of changes, and management of the qualification system of electric wave engineers, industrial engineers, and craftsmen are authorized by the Minster of Information and Communication.

Issues regarding the operation of the NTQS such as the creation, integration, and abolishment of qualification categories, application requirements for each level, certification procedures, qualification exam. subjects, adjustments in exam. periods, measures for establishing preferential treatment for certificate holders, improvement of the qualification system, exemption conditions, commissioning certification to the private sector, and authorization of private qualification are inquired into by the Technical Qualification System Review Committee, a consultative body under the Minister of Labor consisting of public officials and specialists, and reflected into the national technical qualification policy. The overall operating system of the NTQS is depicted in Figure 4-1.

The NTQS Review Committee is composed of less than 33 members who are either Level 3 or higher government bureaucrats or specialists recommended by the Minister of Labor. The committee also reviews the opening and closing of qualification categories, exam. subjects, application requirements, adjustments in exam. administration, measures for the establishment of preferential treatment for certificate holders, and general measures for improving the NTQS.


Ministry of Labor
Overall Management of Qualification System
- Operation of NTQS Review Commission
- Making Plans for administration of qualification exam.
- Administration of laws and qualification system
Government
Utilization of Qualification Acquirers
- Related laws
- Disciplinary action(I.e.cancellation of qualification
Administrative Institution (HRD Korea, KCCI)
Implementation and Administration of Certification
- Formulation of exam. Question
- Implementation of exams
- Registration maintenance

[Figure 4-1] The Operating System of the NTQS

The Ministry of Labor is the main organization that deals with the NTQS and directs policy regarding its operation and adjustments among various authorities. It is also in charge of the 269 categories in technical qualification, including machinery safety engineer, chemical engineering safety engineer, industrial safety engineer, and carries out the following functions:

① creating and abolishing qualification categories and exam. subjects, deciding on the application requirements,

② deciding on various standards, such as certification fees

③ confirming administration plans of the qualification exams

④ operating and finding ways to improve the NTQS, such as promoting preferential treatment for certificate holders, improving the qualification administration system, and post-qualification education.

The 15 related authorities have the right to make plans for implementing exams, to decide on qualifiers, to decide on registration and its cancellation, and to carry out post-qualification education. In addition, they may cancel the qualification of certificate holders if they were won through bribery or other dishonest measures.

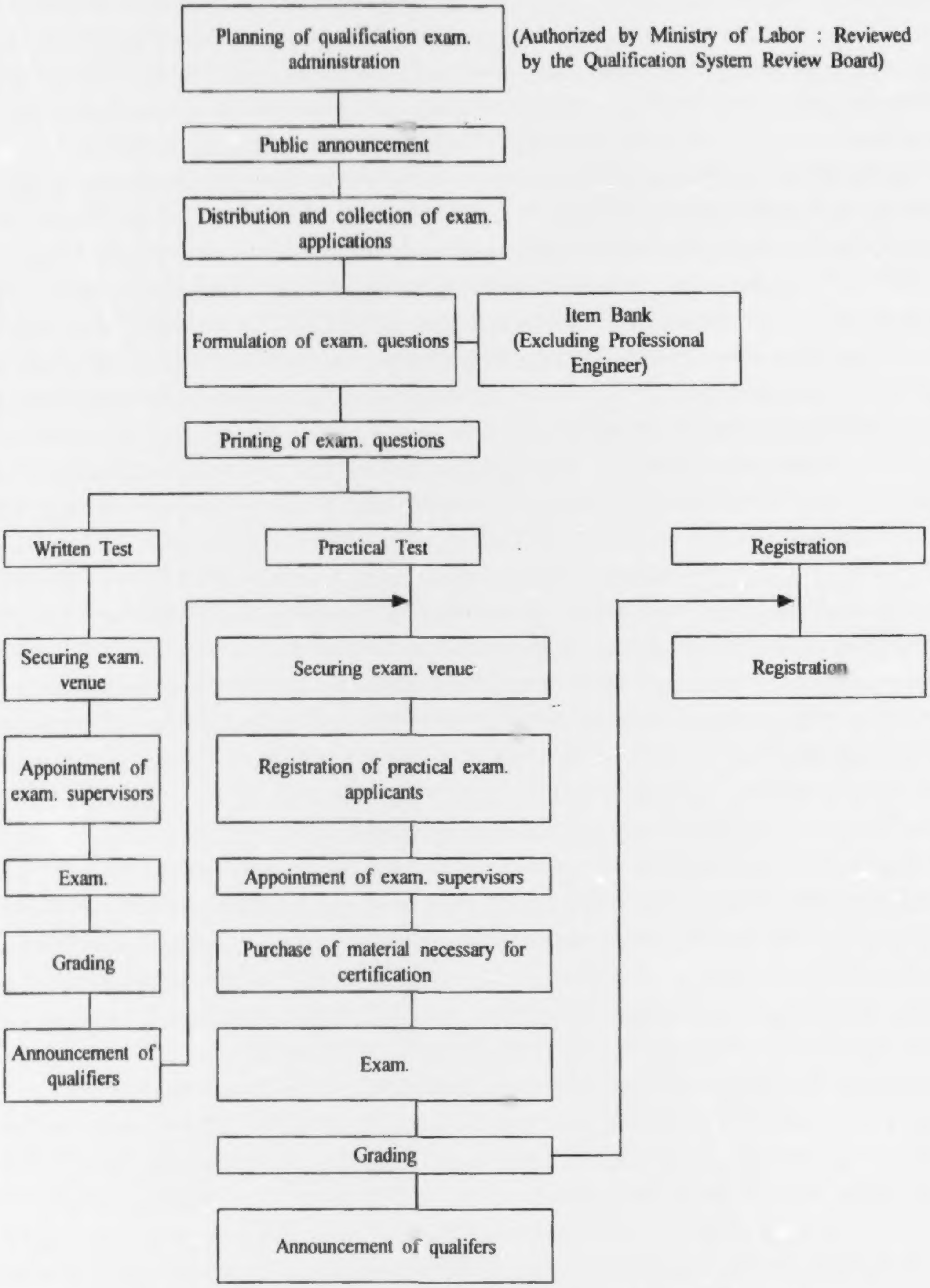
2) Registration Process following the Acquisition of Certificates

Once an applicant has passed the qualifying exam., he or she is required within 15 days of the qualification announcement to register with the related government ministry, which then hands out the certification in the form of a small notebook.

With the Amendment of the Implementation Decree on December 31, 1976, the registration period was extended to 60 days. If, for some reason, the qualifier was unable to register within the 60 days, then he or she could apply for the certificate by attaching a formal excuse within one year. In 1982, the Korea Vocational Training Administration Agency was established to take care of the registration duties. On December 20, 1983, the registration duties in the Business Management field was commissioned to the KCCI, also in charge of the administration of the qualification exams in the field. On October 31, 1991, following the Amendment, the registration along with the exam. administration of wireless equipment Class I, Class II engineers and Class II craftsmen was relegated to HRD Korea.

3) Implementation Process

The implementation of certification is illustrated in Figure 4-2 After the qualification exam. is announced, applications are distributed and collected. Once the test centers and test proctors are secured, the written and practical exams are administered. Then the qualifier list is announced and they are required to register.


Planning of qualification exam. administration
(Authorized by Ministry of Labor : Reviewed by the Qualification System Review Board)
Public announcement
Distribution and collection of exam. applications
Formulation of exam. questions
Item Bank (Excluding Professional Engineer)
Printing of exam. questions
Written Test
Practical Test
Registration
Securing exam. venue
Appointment of exam. supervisors
Exam.
Grading
Announcement of qualifiers
Securing exam. venue
Registration of practical exam. applicants
Appointment of exam. supervisors
Purchase of material necessary for certification
Exam.
Grading
Announcement of qualifers
Registration

[Figure 4-2] Implementation Flowchart of Certification

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5. Credit Bank System for Holders of National Technical Qualification

A"Lifelong Open Learning Society"aims to maximize national competitiveness by making education available throughout the life of individuals and society, expanding time and space restrictions in education. One reform measure to achieve this end is the Credit Bank System, which is being actively pursued by the government. The Credit Bank System seeks to improve upon the limitations of formal education by recognizing the various field experiences and training accumulated by an individual outside the school environment. It also provides motivation for life-long learning to people who have previously had not access to higher education. It was against this backdrop that the Credit Recognition Act was enacted, allowing national technical qualification acquisition to be equated with credits from a formal education institution.

1) Linking Qualification with Formal Education

The plans for recognition of credits for acquirers of national qualification within the formal education setting is as follows:

① It needs to be recognized that the courses listed under the NTQS are much more comprehensive than the titles or content of college courses and cannot be matched. Therefore credits given to certificate holders should foremost be in the form of major requirements, and upon completion of these required courses credits may be handed out as general electives.

② The highest number of formal education credits that may be recognized through the acquisition of qualification is 110 for the bachelor's degree and 65 for junior colleges.

2) Credit Recognition for the Technical Group

① Professional Engineers are given 45 credits.

② Master Craftsmen are given 39 credits.

③ Engineers (formerly Class I Engineers) are given 30 credits.

④ Industrial Engineers (formerly Class II Engineers, Multi-skilled Engineers, Class I Craftsmen) are given 24 credits.

3) Credit Recognition for the Service Group

① Level 1 Word Processing is given 12 credits.

② Level 2 Secretarial Work is given 4 credits.

If a certificate holder has 2 or more qualifications in an identical item, then the credits for the highest qualification is granted in its entirety, while the rest of the qualifications are granted 3/4, 2/4, 1/4 of the recognizable credits in order of grade. All decimal points are rounded to the nearest number. However, if lower-class qualifications are acquired after a higher-level qualification then credits are not recognized.

In the case where 2 or more identical-level qualifications with some overlapping subjects are obtained, then portions of the recognizable credits are subtracted with regards to the overlapping subjects. For Class I and Class II Engineers, 3 credits are cut off for each overlapping subject, and Class I Craftsmen and Multi-skill Craftsmen must forego 2 credits for each overlapping subject.

6. Authorization of Private Qualification by the Government

1) Defining Private Qualification

Private qualification refers to a system of qualification administered and operated by the private sector, including non-governmental private organizations and individuals.

2) National Authorization System of Private Qualification

In order to activate the private qualification system, the Korean government enacted the Basic Qualification Act on March 27, 1997. Pursuant to this law, a state-authorized private qualification system, drafted for the purpose of recognizing important and necessary private qualifications through a set of evaluation processes, was introduced. The task of evaluating applications of private qualifications for government authorization which is expected to start in full-scale in 1999 is undertaken by the Korea Research Institute of Vocational Education and Training(KRIVET). Now Basic Qualification Act is merging with National Technical Qualification Act so as to make unification Act in the filed of qualification.

3) National Authorization Standards for Private Qualification

To qualify for authorized private qualification, an individual must have the appropriate skills that are in accordance with the fundamental directives of the qualification system as layed out in the Basic Qualification Act. A person must also have had three or more qualification credentials that have been in effect for at least one year to this date. Certificates from those private qualification applicants with only the most organized operations are recognized. In the case of the presence of a similar national qualification, the certification standards, subjects, and eligibility of the private qulification must be identical or at a similar level to those of the national qualification.

4) Preferential Treatment for Workers with Authorized Private Qualification

As provided for by the law stipulating the details of national qualification, workers with authorized private qualification are to receive the same treatment as workers with national qualification.

Furthermore, the head of a vocational education and training institute may utilize either certificates of national qualification or private ones as references for admission. In addition, pursuant to the Credit Recognition Act a worker with authorized private qualification may obtain university and junior college credits for high school graduates and university credits for junior college graduates.

5) Execution Results of Authorization on Private Qualification

7 ministries had authorized 28 qualification items of about more 200 items of private qualification in 2001. For example, ministry of labour authorized !3 qualification items such as mechatronics, jig and fixture design, computer operation, industrial electronic instrument manufacturing, furniture design etc.

Ministry of education and human resource authorized chinese character capability. Ministry of information and communication authorized information system auditor, internet information searcher and personal computer application capability test.

Government had put the expiry date to all authorized private qualification in the range of 2~5 years.

Each authorized private institute being like to extend expriy date should take the recertification within these date.

In 2002 government is in the process of examining more 200 private qualification items which want to get authorization from government. At the end of 2002 government is going to issue the certificate of authorization to private qualification institute which can satisfy the criteria for the authorization of private qualification institute.

7. Analysis on Test Results of National Technical Qualification

According to [Attachment 1], which shows the overall picture of the national technical qualifications examination up to 2000, 29,339,559 people had applied for the exam in five different grades. Applicants for craftsman account for 68.7% of the total, while those for industrial engineer account for 17.6%, with these two combined giving 86.7% of all applicants. If the applicants for the engineer grade are added, the percentage increases to 99.2%. Clearly, these three qualification grades have been the major ones in the national technical qualifications system.

However, the average success rate stood at only 21.7%, which is quite low. Out of five qualification grades, the success rate for master craftsman and craftsman were the highest, while that of professional engineer was the lowest at 11.03%.

[Attachment 2] presents cumulative figures for applicants and successful applicants by job category from 1974 to 2000. For the professional engineer grade, the five job categories of mechanical engineering, electric engineering, civil engineering, architecture, and safety management attracted the highest number of applicants. For master craftsman, the top four job categories were mechanical engineering, metals, electric engineering, and food & beverage. For the engineer and industrial engineer grades, the top ten job categories were mechanical engineering, electric engineering, telecommunications, civil engineering, architecture, information processing, land development, safety management, environmental engineering, and industrial application engineering. For craftsman, the top four job categories were mechanical engineering, electric engineering, telecommunications, and food & beverage. Overall, mechanical and electric engineering were most often chosen.

This can be explained by the fact that mechanical engineering has more sub-categories than any other job category, and the qualification in electric engineering serves almost as a license and so is recognized by law, enhancing the applicability of the qualification in the field. All in all, job categories with a high application rate are those with more sub-categories and those that offer license-like qualifications.

A review of success rates by qualification grade and by job category reveals that the success rate for the professional engineer grade in such job categories as metals, ship-building, aircraft, textiles, agriculture, marine, and energy is in the range of 30~40%, much higher than the average success rate of 21.7%. However, the success rate by job category shows a high variation.

For the master craftsman grade, textiles, mining, and agriculture record a high success rate, ranging from 50 to 100%. For the engineer grade, the success rate is quite low. The top three job categories in terms of success rate are aircraft, marine and energy. However, the success rate of every job category for the engineer grade is lower than the overall success rate for the entire examination, with the exception of marine, with its success rate standing at 24.48%.

Those testing for the industrial engineer grade have a lower success rate than the overall average in most job categories. Textiles, marine, and arts & crafts form the leading groups with higher success rates, but their average is only as high as the overall average of the examination. The success rate for craftsman stands at between 30~50% in such categories as telecommunications, textiles, land development, agriculture, marine, and arts & crafts. As in the professional engineer grade, the success rate for craftsman shows a high variation by job category.

The number of applicants, the number of successful applicants, and the rate of success by job category, by qualification grade, and by sub-qualifications category for the past three years were examined. The success rate of all sub-qualification categories for the past three years stands at 20.2%, with stable annual rates.

In mechanical engineering, the success rate for the past three years reached 24.1%, slightly higher than the overall average, with stable annual rates. The success rate in metals is 25.55%, and in chemical engineering and ceramics it is 20.12%. The average success rate in electrical engineering is lower than the total average, standing at 18.12%. The figures for electronic engineering, telecommunications, and ship- building stand at 24.39%, 18.28%, and 41.36%.

Though the success rate is relatively high in the ship-building area, the number of applicants was only 1,283. In aircraft, 15,000 applicants took the examination during the past three years, and 29.96% of them succeeded. In addition, the success rate in aircraft is increasing each year.

The success rates for civil engineering and architecture stand at 24.49% and 40.99%, and the rates are increasing each year, while the figures for textiles and mining are 35.26% and 21.32%, rates that are also increasing each year. Information processing has a 17.08% success rate, lower than the overall rate, and land development, agriculture, and marine stand at 22.96%, 24.33%, and 30.96%, with the lowest number of applicants in these three being marine. Industrial design's success rate is only 10.93%, considerably lower than the overall average. The success rates for energy, safety management, environmental engineering, and industrial application stand at 17.22%, 13.84%, 14.32%, and 28.05%, with environmental engineering increasing each year.

While the success rate for transportation engineering is 7.93%, with only 1,692 applicants, the figure for arts & crafts is quite high, at 44.54%. Applicants for professional office worker have a low success rate, 6.47%, while this figure for other services is 18.42%.

In terms of the number of applicants for the past three years, mechanical engineering, with 802,975 applicants, takes top place. For electrical engineering and telecommunications, the figures stand at 301,733 and 634,976, with many applying for the craftsman grade in operation of information devices in the telecommunications area. The number of applicants reached 438,619 for information processing and 435,268 for other services, with the fields of Korean cuisine and hairdressing being the most popular.

Such concentration is the result of the diverse sub-qualifications categories in each job category and the license-like qualifications. It also reflects the needs of industry as the nation moves toward an information society.

The number of applicants, the number of successful applicants, and the rate of success in written and practical examinations for the past three years were studied. For the professional engineer grade, the success rate for the practical examination was almost three times higher than that for the written examination, so the written examination is more crucial. The success rate of the practical examination for professional engineer is much higher than that of any other qualification group.

On the other hand, for the grade of master craftsman, the success rate for the written examination is higher than that of the practical examination, so that success in the overall examination is usually determined by the practical examination. In 2000, the gap between written and practice examinations widened, and the success rate of practical examination remains fairly low.

For the engineer grade, the success rate for written examinations is lower than that for the practical examination, so that here again the written examination is more important for obtaining the qualification. A similar trend is found for the industrial engineer.

Showing a different outcome, the success rate for the practical examination for craftsman is much higher than that for the written examination, so that the success rate for the practical examination for the craftsman grade from 1998 to 2000 was almost that of the professional engineer grade.

In conclusion, the overall success rate of the national technical qualifications examination remains very low, though the variation of the success rate by qualification grade is small. In terms of the number of applicants, craftsman are at the top, followed in order by industrial engineer, engineer, professional engineer, and master craftsman. The number of successful applicants by grade shows the same sequence.

This study has shown that the number of applicants by job category is heavily affected by the number of sub-qualification categories in a given job category, by a license-like qualification, and by the needs of the information society. Job categories with the highest numbers of applicants are mechanical engineering, electric engineering, telecommunications, information processing, and"other services."The overall average success rate from 1998 to 2000 is as high as that for 1974 to 2000, with stable annual rates. The comparison of success rates between written and practical examinations by qualification grade reveals that, for the professional engineer, engineer, industrial engineer, and craftsman, the written examination is critical in acquiring qualification. Only in the case of the master craftsman is the practical examination more important than the written, thus significantly affecting an applicant's success at acquiring qualification.

8. Cross-Border Recognitions of National Technical Qualification

1) APEC Engineer

(1) Background

As of October, 2001, Korea has been promoting the international recognition of Korean engineers' qualifications. Participating in the EMF (Engineers Mobility Forum), a channel for discussions on the global mobility of engineers, Korea is accelerating its efforts to have the qualifications of its professional engineers acknowledged globally. Established and led by a group of advanced countries including the U.S., the U.K., and Australia, the Forum is based on the Washington Accord. The goal of the Forum is to ensure global mobility among those the forum recognizes as international engineers. Among the members of the Forum are Korea, Canada, South Africa, the U.K., Hong Kong, Australia, Ireland, New Zealand, the U.S., and Japan.

Also working on measures to ensure the international mobility of technologists and technicians, the Forum carries out the following tasks.

First, the Forum develops, adjusts, supervises, and promotes standards and/or criteria that can be generally agreed upon, so as to promote the cross-border mobility of experienced professional engineers.

Second, the Forum develops and promotes a strategy to help governments and their authorities administer a non-discriminatory licensing system by promoting better understanding of obstacles hindering such a system.

Third, the Forum promotes the acceptance of its standards and action guidelines.

Fourth, the Forum verifies whether countries are adopting the optimal system of developing and evaluating engineers so as to increase the professionalism of its engineers, and urges those countries not in compliance to adopt the optimal system.

Fifth, the members of the Forum continue their mutual supervision and information exchange through the most proper measures including the following.

- Exchange information and communicate regularly with each other on evaluation procedures, standards, and systems, and on the production of manuals, other publications, and lists of recognized engineers.
- Invite member nations to observe the details of evaluations and other procedures, along with the general operation of the organization.
- Invite member nations to observe meetings, at which governments, committees, and other organizations discuss evaluations and other procedures, along with the general operation of the organization.

In addition, Korea is also participating in the"APEC Engineer Project,"led by the APEC HRDWG (APEC Human Resource Development Working Group). Initiated by Australia, the project aims to develop measures to mutually recognize engineers of the region as"APEC Engineers".

In this paper, we will review the progress and current trends of the APEC Engineer Project and identify improvement needs in Korea's current drive toward the global recognition of national qualifications.

(2) Progress of the"APEC Engineer Project"

Under the leadership of the IEAust(Institute of Engineers, Australia), APEC HRDWG is working on measures to mutually recognize engineers of the APEC member countries. The project dates back to May 1996 when the 1st APEC HRD Steering Committee was held in Sydney. In March 1997, the 1st APEC HRD Working Group Committee was held in Bali and, in June 1997, the joint meeting of the 2nd APEC HRD Steering Committee and the 2nd Working Group Committee was held in Melbourne. In 1997, a workshop was held in August and the 3rd Steering Committee in November in the same city of Manila. At the end of 1997, a final report was produced and distributed to APEC member countries.

A series of these activities are being conducted under an intention that the mutual recognition of engineers will be first implemented in member countries who agree with the idea as a result of the APEC HRDWG's work.

The 1st Steering Committee defined the levels of engineers for mutual recognition; graduate professional engineer or equivalent, experienced professional engineer, and executive professional engineer or equivalent. Here, the model engineer is one in his 30s who started from the first level and have worked for about seven years until he became an independent professional practicing what is legally allowed to the given vocation.

Not surprisingly, the 1st Steering Committee did not spare time for discussing such issues as language problems and the lack of understanding of technology standards facing foreign engineers who move to different countries. However, these issues were later included in the agenda at the meeting in Manila in August, so propositions were made similar to those at the meeting in San

Diego participated by member countries of the Washington Accord. The Steering Committee held in Melbourne used the term"APEC Engineer"for experienced professional engineers whose qualifications are mutually recognized. This term has the corresponding meaning to European professional engineer.

Based on the progress of the APEC Engineer Project, engineers of member countries who satisfy the specified education and experience requirements can register themselves as"APEC Engineers".

According to the SEA(Substantial Equivalence Agreement), engineers who have finished the registration can start their practice in any country within APEC. The following is the detailed qualifications to be registered as"APEC Engineer".

First, the candidate should be a graduate of educational courses in engineering at recognized programs.

Second, the candidate should prove he has enough field experience to work independently.

Third, the candidate should have at least 7 years of field experience after college graduation.

Fourth, the candidate should have at least 2 years of working in responsible engineering positions out of 7 years.

Fifth, the candidate should have been receiving quality training for continuing professional development.

The SEA is a system designed to prove engineers from different systems reach the vocational capability that can be mutually recognized, so it makes sure the qualifications for mutual recognition is not in contradiction to the member countries' regulations on the legal qualifications.

Once the SEA gets settled down, it would be necessary to establish the MEA(Mutual Exemption Agreement). Compared with the SEA, introducing the MEA to APEC member countries would be more difficult. As the MEA is more related to the actual practice by engineers in the foreign countries, the MEA will require tedious negotiations and compromises among member countries.

In addition, the difficulty stems from the fact that MEA needs to be signed by the governments. Only when governments sign the agreement, APEC Engineers can practice their engineering profession freely in the signing countries.

Each member country runs its own"APEC Engineer Monitoring Committee"to drive the APEC Engineer Project. They also operate the"APEC Engineer Register", a dedicated body for registering APEC Engineers. The role of the Monitoring Committee is to recognize engineers from various countries as APEC Engineers on behalf of APEC Engineer Coordination Committee, a top decision-making body among countries participating in APEC Engineer Project. In addition, the Coordination Committee approves the Assessment Statement of APEC Engineer, a kind of assessment criteria used by the Monitoring Committees of member countries for recognizing engineers from different countries as APEC Engineers.

As of October 2001, formal members of the APEC Engineer Coordination Committee are 10 in total including Korea, Australia, Japan, Canada, Hong Kong, Malaysia, U.S., Indonesia, the Philippines, and Thailand. The current scope of the APEC Engineer Project covers 11 engineering disciplines such as civil, structure, geotechnical, electrical, mechanical, environmental, mining, industrial, chemical, information technology, and biotechnology. The scope is expected to expand to cover more engineering disciplines.

The discussions on the SEA among members of the APEC Engineering Coordination Committee are almost completed while those on the MEA have just started. Basically the member countries agreed to implement the MEA through

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bilateral agreements. However, they do not disregard the possibility of multilateral agreements depending on the situation. At the moment, in principle, Australia and Singapore agreed to allow APEC Engineers to practice in their territories by signing the Free Trade Agreement. In addition, Australia and Japan are engaged in the discussion on the bilateral agreement in civil and structure engineering. Likewise, Korea has already started discussion on the bilateral agreement with Japan in civil and structure engineering.

(3) Results on Selection of APEC Engineer

Korea had established Korea APEC Engineer Monitoring Committee and APEC Engineer Register.

These organizations are essential to conducting works in relation to the APEC Engineer. As of October 2001, the number of APEC Engineer registration in Korea have reached to 146 persons already. In the near future, 828 persons will be qualified as APEC Engineer as soon as completing continuing professional development(CPD) which is required by APEC Coordinating Committee mandatorily in order to become APEC Engineer in each member economy.

(4) Future Directions

In the future, mutual recognition of professional engineers is expected to accelerate within the frameworks of the WTO and the GATS. As is well known, countries in North America and Europe have already signed regional free trade agreements. In order to incorporate opinions of Asian countries as well as ours into the WTO and the GATS, the Korean government has pursued a policy of active participation in the APEC, the third potential regional group following the NAFTA and FEANI. At the moment, Australia is playing a leading role in the Asia Pacific region. Given that fact that Australia is still part of the Anglo-Saxon culture that speaks English as an official language, it is necessary for Korea to take the initiative, so non-English-speaking countries can jointly cope with the issue of mutual recognition of professional engineers.

In fact, mutual recognition of professional engineers is already affecting the real economy. For example, when a Japanese electronics manufacturer exports a plant to overseas, it does not recognize the goods produced as finished ones if there is no signature attached by a responsible professional engineer.

In the construction industry, if a company doesn't have any professional engineers who are not internationally recognized, it can not win the oversea projects.

For Korea, export industry is essential for its survival and is the only solution through which we can cope with the current economic difficulty. In order to export goods and plants that are globally competitive and to maintain a stable level in winning overseas construction projects, it is critical to ensure globally recognized qualifications of the Korean engineers.

In this context, it is necessary to develop a national skill standard system enacting the skill standard.

Once the system is established, it is also necessary to upgrade requirements for the examination as well as the contents, levels, and forms of the qualification examination to those of the advanced countries. At the moment, as the examination guidelines are not specified, it is expected to experience quite a difficulty in signing bilateral agreements that are required for Korean APEC Engineers' to make inroads into foreign countries. In addition, it is important to improve the quality of engineering education in Korea to the world class through more accreditation. For this purpose, it is necessary to accelerate some of the activities that have already started in a very systematic way.

2) Mutual Recognition of IT Qualifications between Korea and Japan

In September 2000, the two leaders of Korea and Japan adopted a"Declaration on IT Cooperation Initiative,"in which they agreed on 8 agenda

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including cooperations on e-commerce and exchange of IT manpower. As of July 2001, based on one of the 8 cooperation agenda,"Cooperation on Promoting IT Manpower Exchange,"the two countries are working on measures to mutually recognize IT qualifications.

In April 2001, the Korean delegation visited the JITEC(Japan Information Technology Engineers Examination Center), a prime organization administering national IT examinations, and had working-level discussions with its Japanese counterparts on how to pursue mutual recognition of IT qualifications.

Through the discussions, the delegation finished the research on the qualification systems, and the contents and some detail characteristics of the systems of two countries. Currently, the two countries are almost at the end of preliminary stage, having reached a basic agreement on the scope and level of mutual recognition.

(1) The Significance of Mutual Recognition of IT Qualifications between Korea and Japan

The implications of the mutual recognition of IT qualifications between Korea and Japan are quite significant because of the following reasons. First, it is the first event in the history of Korea that Korea's national qualifications are officially recognized based on the mutual recognition agreement. Though the signing parties of the agreement are not the governments of the two countries, still the signing parties represent the two governments as they both are national qualification examination authorities entrusted by the respective governments under their consent. Second, given that this agreement is with Japan, one of the most advanced countries, the contents of the agreement will positively affect agreements on mutual recognition of qualifications Korea will sign in the future. In fact, informal contacts are being made between Korea and Japan to discuss the mutual recognition of APEC Engineers in civil and structure engineering. Considering this, the mutual recognition of IT qualifications will set the standard for coming mutual recognition agreements in other fields.

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Third, with the rapid globalization, the borders between countries in the service market are rapidly collapsing. Especially, the pace of the cross-border exchange of people in IT is being accelerated as advanced countries' need for IT manpower increases in the international labor market. Under these circumstances, in order to achieve competitive advantage in the trade of service, it is necessary to align our national qualifications with the international standards. The mutual recognition of qualifications with Japan, who has already restructured its IT qualifications system and standards to be aligned with the internal standards, will provide an opportunity for Korea to better position its national qualifications system in the international society and to even export its qualification system to the third world countries.

Fourth, it will lay the foundation for the proper treatment of the Korean IT engineers when they are exported. On the other hand, it will also help Korea develop national standards that can attract foreign talents who can support Korea's development of the high tech industries. Once these national standards are developed, they will be used as a baseline for deciding appropriate compensation levels for imported talents and, thus, these national standards will develop into international standards.

(2) IT Qualifications Examination in Japan

Since the first introduction of the IT qualifications examination program back in 1969, Japan had a major restructuring of the program in 1994. With the request for another major restructuring of the qualifications examination program by the Industrial Structure Council, Japan has launched a new qualifications system containing new descriptions and levels of qualifications based on the technology standards of the U.S. in IT. Japan defines the role of IT to be reducing production cost and speeding up the delivery of service. The country also recognized the importance of IT considering it as an essential element promoting efficient cooperation between companies and creating of new industries. Believing that the success of a company will be heavily dependent on the quality of human and physical investments in IT system, Japan perceives the development of talented engineers who can develop and apply IT systems as a national priority.

Because of all these efforts, the Japanese IT education centers are now capable of providing education courses that are aligned with the international standards. In case of IT certification, the Japanese authorities are able to evaluate and certify IT competences based on the international standards. Hiring employees qualified in terms of the international standards, the Japanese companies are laying the foundation for reinforced competitiveness. In addition, the Japanese government can assess the level of its IT labor market from the international standards.

First of all, Japan enacted the"IT Promotion Law"to achieve the following objectives; a) improve knowledge, skills, and competencies of IT engineers by presenting specific levels of qualifications, b) let IT engineers lead education and training with the objective evaluation of skills they have learned, c) provide objective criteria for evaluating IT engineers, and d) change the mind-set of the Japanese people, so that they can properly respond to the changes of the information society.

(3) Improvement Needs

Based on the observations of the Japanese IT qualifications system, we have identified some improvement needs essential for reaching a mutual recognition of IT qualifications with Japan.

First, it is necessary to develop a national skill standard system that corresponds to the national skill levels defined by the international standards. With the current national qualification examination system and its contents and forms, it will be difficult to negotiate the mutual recognition of qualifications with the advanced countries on an equal stance.

Second, it is necessary to develop new qualifications that can serve the emerging needs of the industry by restructuring the current IT qualifications. Considering the expected technological advancement in IT, it will be reasonable to change the current IT qualification system to be a more future-oriented one. In this process, an appropriate role split between the public and private sectors should be ensured.

Third, when setting structures, contents, and levels of different IT qualifications, it is required to perform job analyses. This will ensure the contents and levels of IT qualifications examinations are based on the national skill standards.

Fourth, it is necessary to build an infrastructure for the national qualification examinations including the introduction and development of on-line examination and automatic scoring systems that are already being operated by qualification examiners in the private sector. Building an infrastructure is important as a way to improve the services to applicants for the qualification examinations.

Fifth, it is necessary to establish a system for close cooperation between the government, industry, education and training institutes, and the labor community in order to meet the international standards and align the education and training programs to the needs of the industry. This cooperation system is urgently needed to ensure the global recognition of the Korean qualifications.

9. Current Efforts on Upgrading National Technical Qualification System

At first, government is trying to reform the national qualification system in terms of meeting demands from industries. So as to do this, government is preparing the policy for integrating and modifying certification items, and developing new qualification items, especially in the area of ICT industry.

Second, policy for activating the private qualification market is developing now. As government introduce this kinds of policy, it like to expand the authorization of private qualification and support a in-firm qualification system. Also government have a plan to delegate the authority for implementation of national technical qualification to private institutes so as to diversify the testing centre in terms of upgrading the speciality of national technical qualification items.

Third, policy for strengthening the linkage between vocational education and training and qualification system has been preparing. This linkage should based upon the demands of industries doing their efforts to survive in the era of globalization. To support this efforts government is preparing the Act being able to set up national competency standard, which was already introduced the advanced countries, such as U.K., Australia and so on.

Forth, policy for recognizing the assessment results on vocational competency is reinforcing. we are going to expand credit bank, introduce accreditation system of key skill programs and recognize an apprenticeship as academic career, especially in the are of traditional arts and culture Finally, government try to strengthen international transferability of national technical qualification. So as to carry out this policy, we are participating APEC Engineer Project and preparing mutual recognition with Asian countries in the field of information and communication technology(ICT) industry.

National Qualification system in Lao P.D.R.

Mr.Silarmay Sopraseuth
Vocational Education Development Center
Lao P.D.R

# Overview of the education system

The education system in Lao P.D.R. is organized as follows:

Preschool (nursery, kindergarten)	
General education	11 years
Primary school	5 years
Secondary school	3 years
High school	3 years
Vocational education	2 years
Technical education	3 years
Higher Technical education	3 years
Post graduate	5 years
Non-formal	

The Lao government emphasizes the development of industrial technology as a most urgent objective. In order to achieve this objective, a large number of semiskilled and skilled workers, technicians with up-to-date scientific and technical knowledge are needed. For this purpose, the Lao Government plans to train technical manpower in the vocational, technical and higher technical educational field. This will be under the direction of MOE in the following four technical educational levels.

i) Semiskilled/skilled worker: 2-years skilled workers education, based on 8-years of general education plus 2- years of vocational education,

ii) Technicians (certificate level): 3-years Technician education, based on 11years of general education plus 3 -years of technical education,

iii) Higher Technician (diploma of high level): 3-years Higher technical education, based on 11-years of general education plus 3-years of higher technical education,

iv) Engineer, based on 11 years of general education plus 4 to 6-years of higher education,

v) Bachelor, after finished high school, 2-years of foundation plus 3 to 4-yearsto get the main subject.

The National Skill Qualification System Framework in Malaysia

Mr. Sahar Darusman

ABSTRACT

In the early 1990s, it became apparent that vocational and skill training in Malaysia was no longer capable of meeting the skilled workforce needs of its fast-industrialising economy. The country skills delivery system then was not flexible, not sensitive to markets needs and not responsive enough to meet he new challenges.

In 1992, the National Vocational Training Council(NVTC) was set up to develop the National Occupational Skill Standard and Certification System. Central to the sweeping changes made then were:

- Adoption of a new 5-level Skill Qualification Framework (Level 1 to Level 5) to replace the existing 3-tiered skill certification system (basic, intermediate and advanced); and
- Introduction of the Accreditation Approach in National Skill Certification in place of the rigid trade testing system.

The changes were fundamentally geared towards improving the quality and productivity of the country's skilled workforce, thus enhancing the competitive position of the Malaysian economy at large. The changes also sought to coordinate more effectively the diverse and multi-stranded vacational training activities carried out by both the public and private sector in the country focusing in meeting the actual needs of the Malaysian industry.

The basic thrust of the reforms were:

- To reinforce the adoption of Competency-Based Education/Learning (CBE/L) principles in the vocational training system in Malaysia;
- To make National Skilled Certification System in Malaysia more flexible, accessible to all and user-friendly; and
- To provide alternative career-path for skilled workers and to motivate them to continuously acquire higher skills to enhance their long-term employability.

The new 5-level Skill Qualification Framework provides an accommodative avenue for adults in the workforce to acquire the specific job skills required at the workplace. Not only does the new framework complement the existing school certification system., it futher develops functional maps and skills standards for trainees. Recognising skills acquisition under the framework, the NVTC sets up mechanism to access workforce competence and issue national certificates. To ensure that the skills standards are relevant to the market needs, the industry is highly involved with the development of the performance and skills standards.

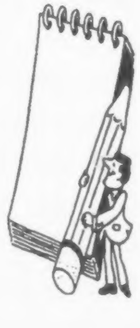
The implementation of the 5-level Skill Qualification Framework, however, faces many challenges that hinder the progress and benefit of the system. In spite of its widely acceptance by the country towards the knowledge economy, the skills recognition scheme has been unable th move forward due to obstacles imposed by the Ministry of Education though the legacy of their legislation.

The 2001 KRIVET INTERNATIONAL CONFERENCE
ON TVET
21 - 23 NOVEMBER 2001

"NATIONAL SKILLS CERTIFICATION SYSTEM IN MALAYSIA"

MOHD SAHAR DARUSMAN
MINISTRY OF HUMAN RESOURCES, MALAYSIA

PRESENTATION TOPICS



- NVTC - The Coordinator of TVET
- QUALIFICATION FRAMEWORK
- DEVELOPMENT OF STANDARDS - NOSS
- ACCREDITATION
- CHALENGGES

ROLE OF NATIONAL VOCATIONAL TRAINING COUNCIL (NVTC)

IN NATIONAL SKILL CERTIFICATION SYSTEM

NVTC - Background

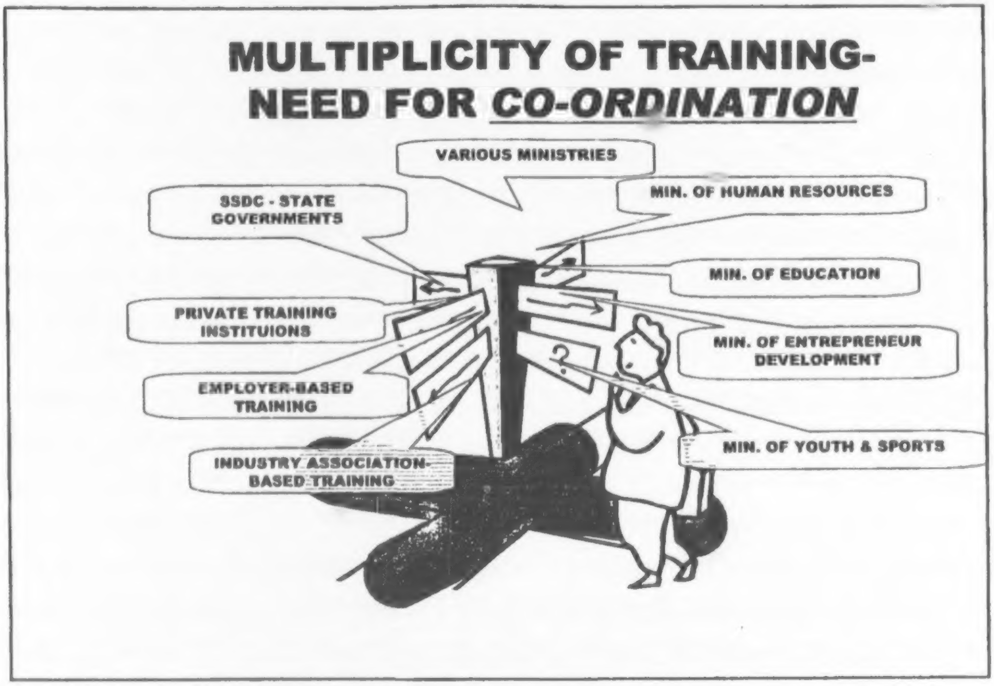
- Established in May 1989 as a coordinating body for TVET in Malaysia – under the MHR.
- COUNCIL MEMBER:
  The Council consists of 10 members from the private sector and 10 from the public sector + two additional members appointed by the Minister of Human Resources.
- The secretary General of Ministry of Human Resources is the Chairman of the Council

NVTC – Mission & Purpose

- MISSION:
  To formulate, promote and coordinate vocational training strategy and programme
- PURPOSE:
  To develop human resources by providing opportunity for skill upgrading and career advancement.

FUNCTION OF NVTC

- Asses skill needs
- Develop, approved and review National Occupational Skill Standards (NOSS)
- Implement and National Skill Certification Programme incl. skill testing & issuing certificate
- Promote skill training / career advancement
- Assist in upgrading capabilities of training personnel
- Conduct study / research on skill training



MULTIPLICITY OF TRAINING-NEED FOR *CO-ORDINATION*

VARIOUS MINISTRIES

SSDC - STATE GOVERNMENTS

MIN. OF HUMAN RESOURCES

MIN. OF EDUCATION

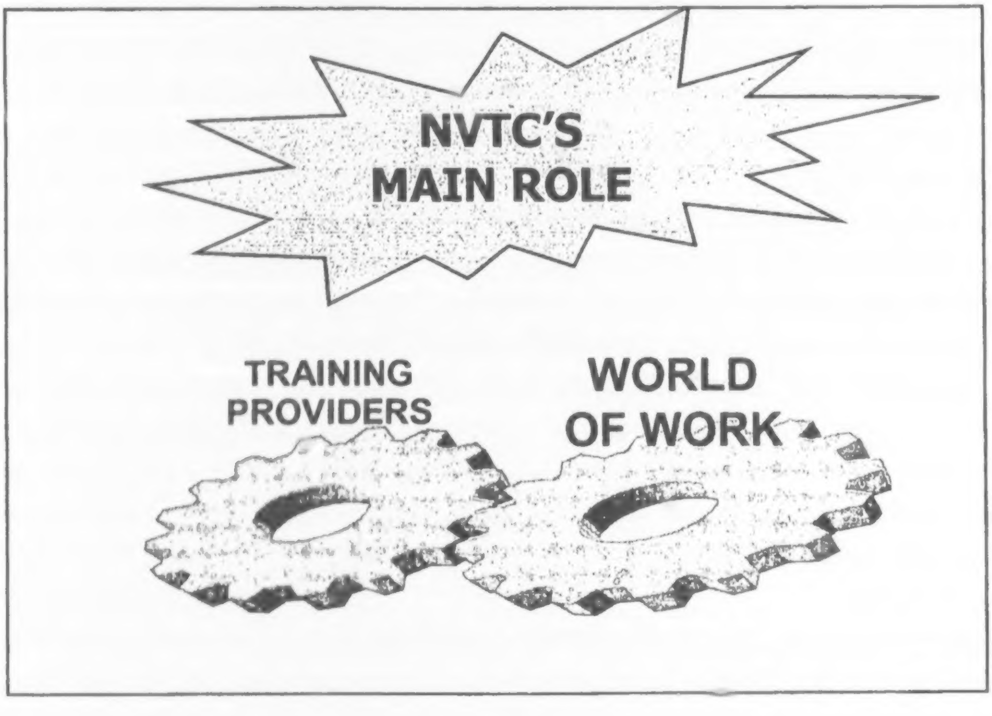
PRIVATE TRAINING INSTITUIONS

MIN. OF ENTREPRENEUR DEVELOPMENT

EMPLOYER-BASED TRAINING

MIN. OF YOUTH & SPORTS

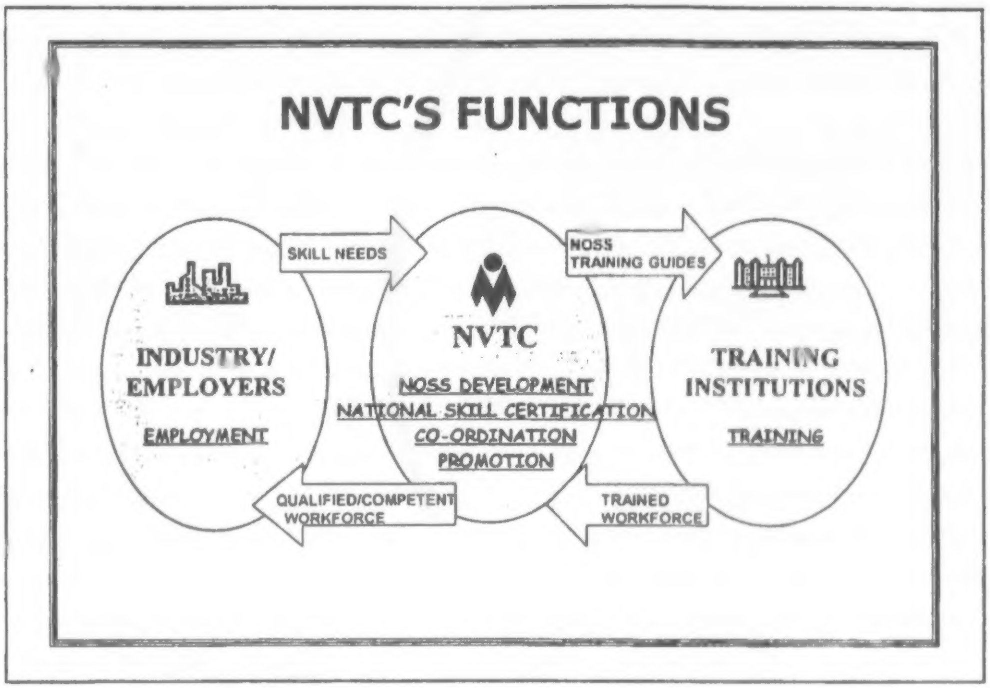
INDUSTRY ASSOCIATION-BASED TRAINING



NVTC'S MAIN ROLE

TRAINING PROVIDERS

WORLD OF WORK



NVTC'S FUNCTIONS

INDUSTRY/ EMPLOYERS

EMPLOYMENT

SKILL NEEDS

NVTC

NOSS DEVELOPMENT

NATIONAL SKILL CERTIFICATION

CO-ORDINATION

PROMOTION

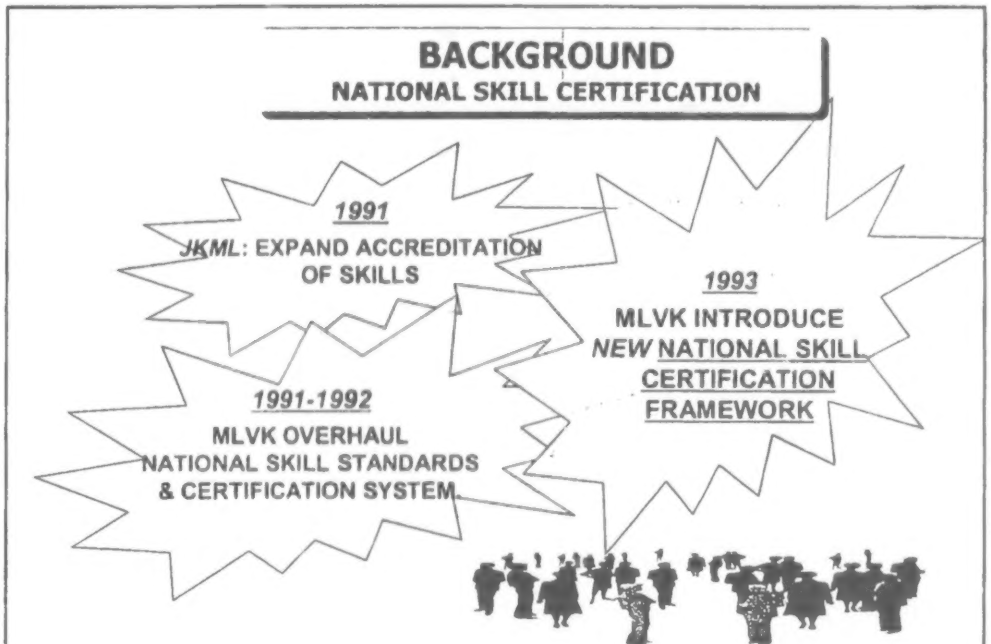
NOSS TRAINING GUIDES

TRAINING INSTITUTIONS

TRAINING

TRAINED WORKFORCE

QUALIFIED/COMPETENT WORKFORCE



BACKGROUND
NATIONAL SKILL CERTIFICATION

1991

JKML: EXPAND ACCREDITATION OF SKILLS

1991-1992

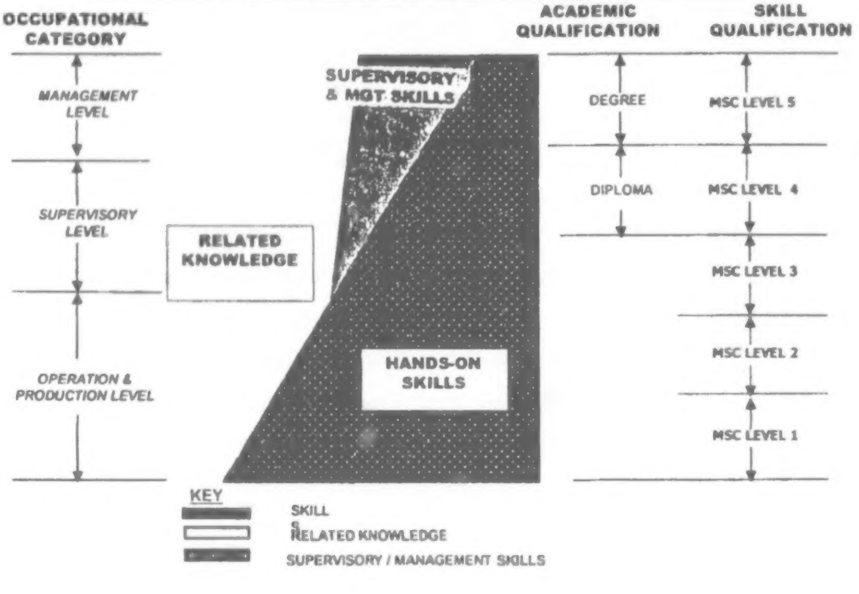
MLVK OVERHAUL NATIONAL SKILL STANDARDS & CERTIFICATION SYSTEM

1993

MLVK INTRODUCE *NEW* NATIONAL SKILL CERTIFICATION FRAMEWORK

QUALIFICATION FRAMEWORK
(BASED ON NOSS)

QUALIFICATION FRAMEWORK
NATIONAL SKILL CERTIFICATION


OCCUPATIONAL CATEGORY
MANAGEMENT LEVEL
SUPERVISORY LEVEL
OPERATION & PRODUCTION LEVEL
RELATED KNOWLEDGE
SUPERVISORY & MGT SKILLS
HANDS-ON SKILLS
ACADEMIC QUALIFICATION
DEGREE
DIPLOMA
SKILL QUALIFICATION
MSC LEVEL 5
MSC LEVEL 4
MSC LEVEL 3
MSC LEVEL 2
MSC LEVEL 1
KEY
SKILLS
RELATED KNOWLEDGE
SUPERVISORY / MANAGEMENT SKILLS

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BASIC POLICY THRUSTS

NATIONAL SKILL CERTIFICATION

Reinforce adoption of
COMPETENCY-BASED TRAINING
in skill training system.

Make National Skill Certification
more FLEXIBLE, ACCESSIBLE
TO ALL & USER-FRIENDLY.

PROMOTING Accreditation of Prior Achievement (APA)

- APA is a procedure in which the current competencies of a candidate is assessed and verified for the purpose of the award of Malaysian Skill certificate, basing on his/her previous achievements.
- Evidence of competencies may include works experiences; training attended; certificate; work-related testimonials etc.

DEVELOPMENT OF STANDARDS

NATIONAL OCCUPATIONAL SKILL STANDARDS (NOSS)

PCL/MLVK

DEFINITION OF 'NOSS'

A NOSS is defined as a specification of the competencies expected of a skilled worker who is gainfully employed in Malaysia for an occupational area and level

PCL/MLVK

5 LEVELS OF NOSS ......

LEVEL 1

Competent in performing a range of varied work activities, most of which are routine & predictable...

Routine & Predictable So what?!!
##
@@??
Help...

LEVEL 2

Competent in performing a significant range of varied work activities, performed in a variety of contexts. Some of the activities are non-routine & require individual responsibility & autonomy...

LEVEL 3

Competent in performing a broad range of varied work activities, performed in a variety of contexts, most of which are complex & non-routine. There is considerable responsibility & autonomy, and control or guidance of others is often required...

5 LEVELS OF NOSS ......

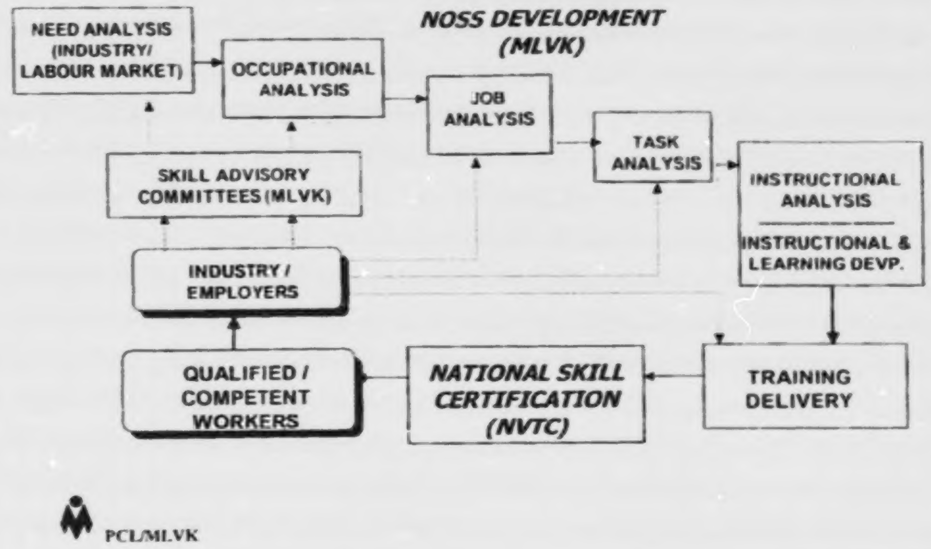
LEVEL 4

Competent in performing a broad range of complex technical or professional work activities performed in a wide variety of contexts and with a substantial degree of personal responsibility and autonomy. Responsible for the work of others and allocation of resources is often present

LEVEL 5

Competent in applying range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts. Very substantial personal autonomy and often significant responsibility for the work of others and for the allocation of substantial resources feature strongly, as do personal accountabilities for analysis, diagnosis, design, planning, execution & evaluation.

COMPETENCY-BASED TRAINING IN MALAYSIA



NOSS DEVELOPMENT (MLVK)

NEED ANALYSIS (INDUSTRY/ LABOUR MARKET)

OCCUPATIONAL ANALYSIS

JOB ANALYSIS

TASK ANALYSIS

INSTRUCTIONAL ANALYSIS

INSTRUCTIONAL & LEARNING DEVP.

SKILL ADVISORY COMMITTEES (MLVK)

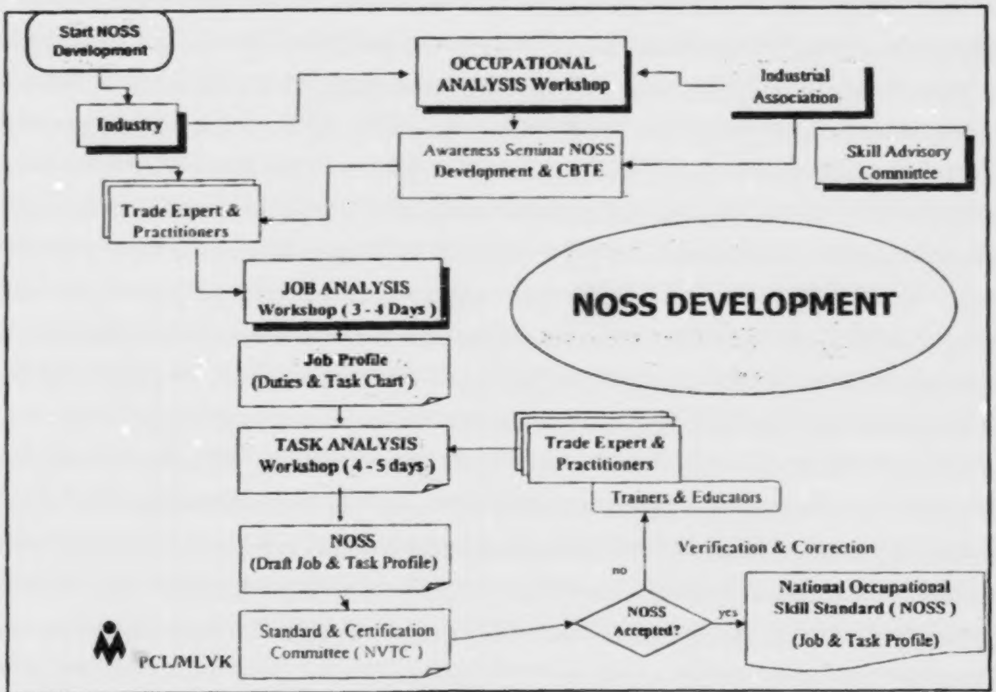
INDUSTRY / EMPLOYERS

QUALIFIED / COMPETENT WORKERS

NATIONAL SKILL CERTIFICATION (NVTC)

TRAINING DELIVERY

PCL/MLVK



Start NOSS Development

Industry

OCCUPATIONAL ANALYSIS Workshop

Industrial Association

Awareness Seminar NOSS Development & CBTE

Skill Advisory Committee

Trade Expert & Practitioners

JOB ANALYSIS Workshop (3 - 4 Days)

NOSS DEVELOPMENT

Job Profile (Duties & Task Chart)

TASK ANALYSIS Workshop (4 - 5 days)

Trade Expert & Practitioners

Trainers & Educators

Verification & Correction

NOSS (Draft Job & Task Profile)

no

NOSS Accepted?

yes

National Occupational Skill Standard (NOSS) (Job & Task Profile)

Standard & Certification Committee (NVTC)

PCL/MLVK

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THE NUMBER OF NOSS

LEVEL	TOTAL
1	105
2	156
3	171
4	36
5	33
SUPPLEMENTARY	1
TOTAL	502

FIELDS OF NOSS

1. Draughtsman
2. Building Construction
3. Woodworking & Furniture
4. Tourism & Travel
5. Hotel
6. Theme Park
7. Welding Technology & Metal Fabric.
8. Non-Destructive Testing
9. Machinery & Land Transportation
10. Motor Vehicle Assembly
11. Maritime
12. Crane Operator
13. Motorcycle Assembly
14. Aeronautic
15. Printing Technology
16. Personal Services
17. Business & Finance

18. Textile & Apparel
19. Handicraft
20. Electrical
21. Electronic, Audio & Video
22. Precision Instrument
23. Information Technology – Computer / Multimedia
24. Telecommunication
25. Plastic Technology
26. Metal Machining Technology
27. Mechanical Maintenance
28. Tool & Die Making
29. Foundry
30. Mechatronics
31. Weapon Technology
32. Land Surveying
33. Scuba Diving - Recreation / Commercial
34. Supplementary

PCL/MLVK

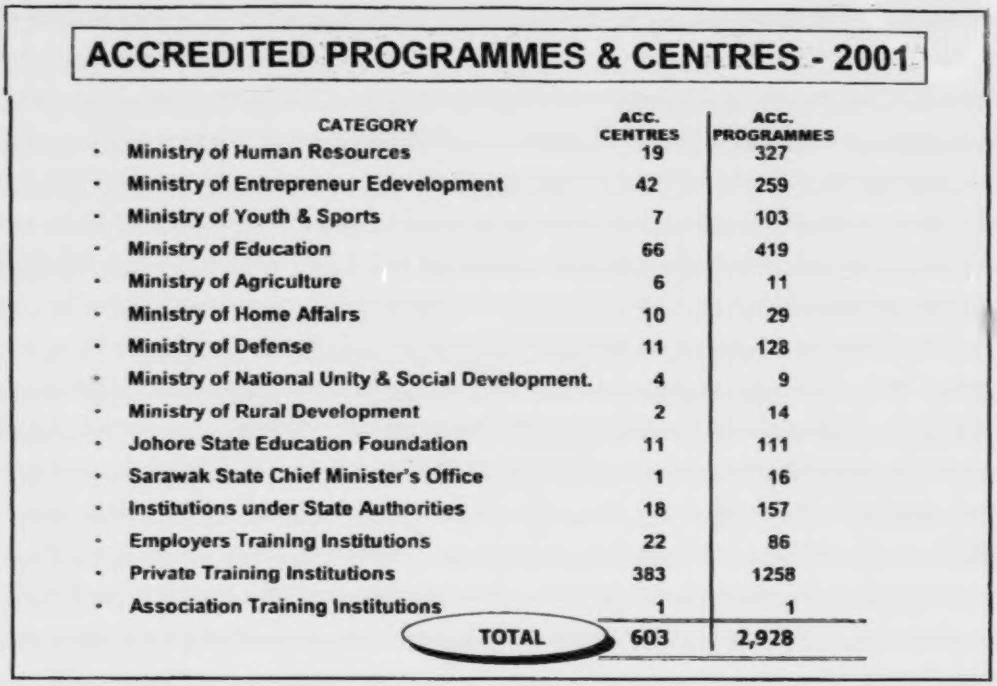
ACCREDITATION

A procedure in which the NVTC evaluates and approves an organisation as an ***ACCREDITED CENTRE*** for undertaking training and assessment leading to the award of the **Malaysian Skill Certificates**.

ACCREDITATION CRITERIA

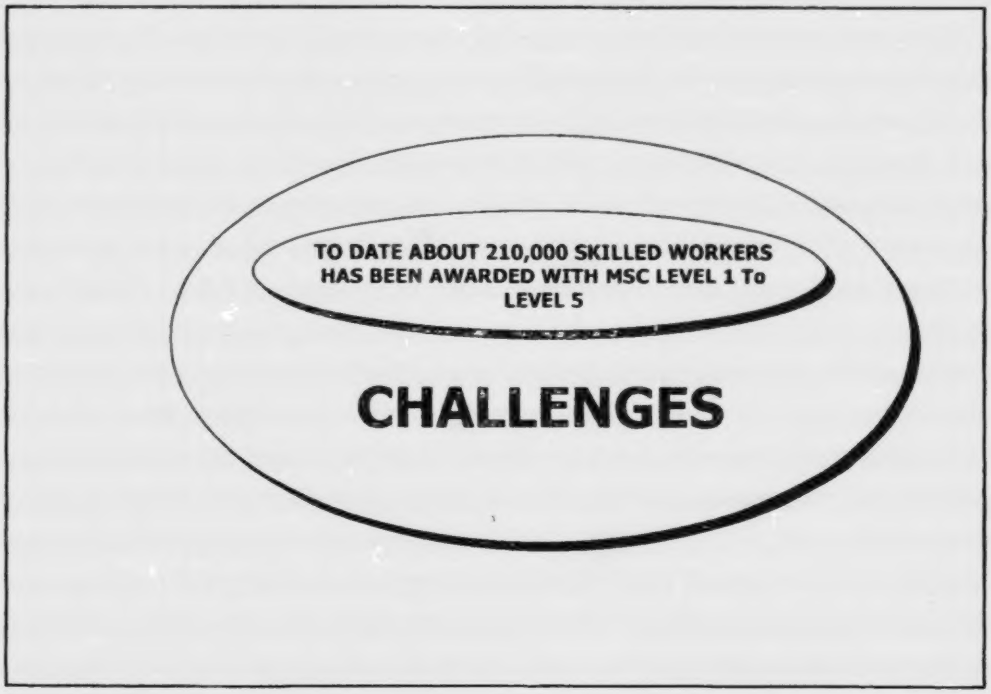
- Organisation has been *legally established.*
- Able to provide physical *facilities/resources*.
- Has, or can gain access to, qualified *trainers*.

- Able to undertake training & assessment to meet *NOSS*.
- Able to meet *quality assurance* policies & procedures, incl. having Assessors & Internal Verifiers.
- Able to provide guidance and support to *candidates*.



ACCREDITED PROGRAMMES & CENTRES - 2001

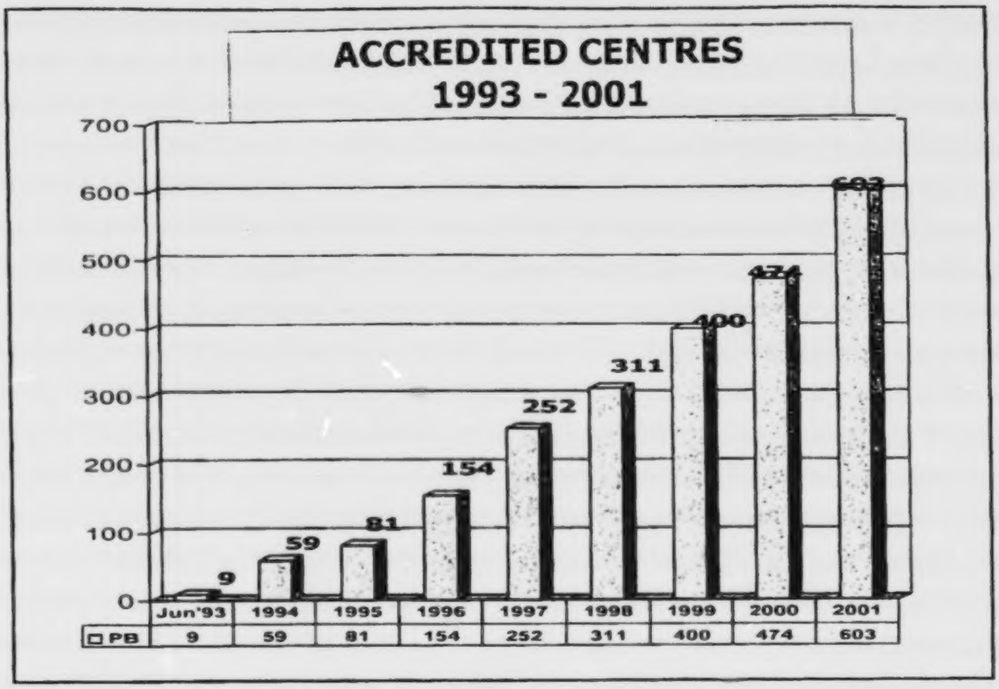
CATEGORY	ACC. CENTRES	ACC. PROGRAMMES
• Ministry of Human Resources	19	327
• Ministry of Entrepreneur Edevelopment	42	259
• Ministry of Youth & Sports	7	103
• Ministry of Education	66	419
• Ministry of Agriculture	6	11
• Ministry of Home Affairs	10	29
• Ministry of Defense	11	128
• Ministry of National Unity & Social Development.	4	9
• Ministry of Rural Development	2	14
• Johore State Education Foundation	11	111
• Sarawak State Chief Minister's Office	1	16
• Institutions under State Authorities	18	157
• Employers Training Institutions	22	86
• Private Training Institutions	383	1258
• Association Training Institutions	1	1
TOTAL	603	2,928



TO DATE ABOUT 210,000 SKILLED WORKERS HAS BEEN AWARDED WITH MSC LEVEL 1 To LEVEL 5

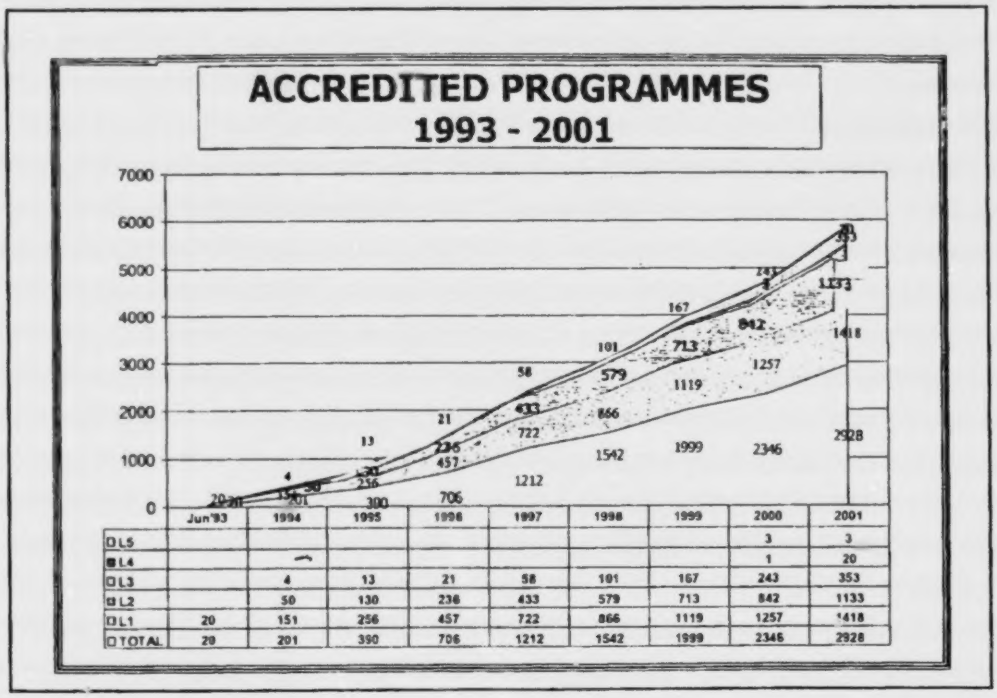
CHALLENGES

ACCREDITED CENTRES
1993 - 2001



	Jun'93	1994	1995	1996	1997	1998	1999	2000	2001
☐ PB	9	59	81	154	252	311	400	474	603

ACCREDITED PROGRAMMES
1993 - 2001



	Jun'93	1994	1995	1996	1997	1998	1999	2000	2001
☐ L5								3	3
■ L4								1	20
☐ L3		4	13	21	58	101	167	243	353
☐ L2		50	130	236	433	579	713	842	1133
☐ L1	20	151	256	457	722	866	1119	1257	1418
☐ TOTAL	20	201	390	706	1212	1542	1999	2346	2928

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LEGACY OF EDUCATION ACT, 1996

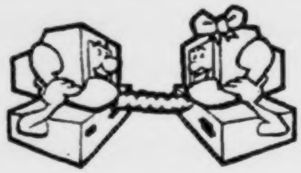
- LONG OVERDUE RECOGNITION BY THE PUBLIC SECTOR - SKM Level 4 & 5
- DIFFICUTY FOR NVTC TO ESTABLISHED SKILLS TRAINING ACT (NATIONAL SKILL DEVELOPMENT ACT) - Legacy of Education Act 1996

ENHANCING FURTHER TRAINING & RETRAINING

- MAKING SUCH TRAINING AVAILABLE & ACCESSIBLE TO ALL
- EXPANDING & DIVERSIFYING LEARNING OPPORTUNITIES
- PROMOTING CULTURE OF LIFELONG TRAINING & LEARNING

MEETING NEW DEMANDS OF K-ECONOMY

KNOWLEDGE WORK INVOLVES ACTIVITIES
THAT ARE LARGELY -
- INFORMATION BASED
- KNOWLEDGE INTENSIVE
- KNOWLEDGE GENERATING



CHALLENGES FOR EDUCATION & TRAINING

DEVELOPING KNOWLEDGE-WORKERS

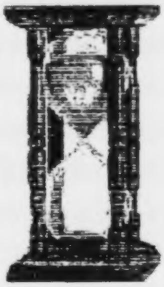
- **ENHANCING COMPUTER LITERACY**
- **DEVELOPING SKILLS & COMPETENCIES REQUIRED BY NEW TECHNOLOGIES & ECONOMY**
- **PROVIDING ENABLING INFRASTRUCTURE AND ENVIRONMENT.**

ENHANCING E-LEARNING IN VOCATIONAL EDUCATION & TRAINING

- **PROVIDING *E-LEARNING INFRASTRUCTURE* INCLUDING COMPUTERS AND TELECOMMUNICATION HARDWARE, & INSTRUCTIONAL AND LEARNING SOFTWARE**
- **DEVELOPING THE *TEACHING & ADMINISTRATIVE STAFF.***
- **DEVELOPING EXPERTISE FOR E-LEARNING *CURRICULA DEVELOPMENT & TRAINING MATERIALS*.**

CONCLUSION

- The introduction of the new National Skill Certification system in 1993, by the NVTC, serve to re-shape vocational training in Malaysia towards meeting the needs of today's workplace more effectively.



- How ever the more flexible framework of national skill recognition and qualifications has been deemed necessary to promote a national 'training culture' which is more conducive for the personal motivation of skilled workers – thus leading to the overall upgrading of competencies amongst country's skilled workforce.

- Transforming towards the new economy involves changing the mindset, changing the education and training system and strategies, and an incessant desire to retrain and to reshape the workforce.

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HUMAN RESOURCES TRAINING PROGRAMME IN MAIAYSIA

Mr. Sahar Darusman

Overview

1. Human resource development receives significant attention from the Government because of its strategies role in helping the country to learn and build relevant skills. A successful human resource development allows the country to cultivate the skills necessary for competitive advantage.

Hence, continuous investment in the people represents a more enduring way to build a nation's capabilities.

2. In making Malaysia an entirely developed nation by the year 2020, the Prime Minister acknowledges that talents, skiffs, creativity and will of its people are the most important resource of any nation[2]. People as the ultimate resource must be given the fullest emphasis possible for the development towards the highest standards of skills, knowledge upgrading, competencies, work attitudes and motivation. Human resource development transpires as a vehicle towards realising the goals of Vision 2020 for Malaysia's industrialization and economic growth.

3. In a globalize environment of integrated markets and rapid changes in technology, a paradigm shift is needed to ensure sustainable growth in this new global economy. As knowledge becomes a more important source of economic growth and competitive advantage, Malaysia needs to transform into a

---

[2] The Working Paper 'Malaysia: The Way Forward' was presented by the Prime Minister, the Honourable Dato Seri Dr. Mahathir bin Mohamad at the Inaugural Meeting of the Malaysian Business Council on 28 February 1991.

knowledge-driven economy (K-economy) in order to sustain the development of the country. The ability to shift to this new competitiveness paradigm requires Malaysia to develop an adequate supply of skills and continuously refresh them. Therefore, workers will need to have updated knowledge and relevant skills.

Human Resource Development Imperatives

4. To achieve the status of a fully developed and industrialised country by the year 2020, Malaysia adopts a significant consideration on human resources development in all major development plans. The human resource development obtains its place in the Five-Year Development Plans, the Outline Perspective Plans, the Industrial Master Plans by outlining provisions, policies, strategies and programmes for a progressive human resource advancement.

5. As the pace of industrialisation picked up in the 1980's, there was an increasing demand for technical and skilled manpower to develop the industrial sector. Nevertheless, with industries and services becoming more knowledge-intensive and high-technology, the country's manpower need to be multi-skilled, disciplined and adaptable since they will be operating under changing market environments brought upon by globalisation and new technological breakthroughs. In this regard, the education and skill delivery system ought to be strengthened in order to create a pool of trained and highly skilled manpower in line with industry requirements. Thus, the human resource and skills development becomes a critical instrument in accelerating and sustaining economic growth, This development constitutes the biggest challenge to the country's aspiration to achieve higher and sustainable growth as Malaysia moves towards the knowledge economy. To build a world-class workforce, shifting from unskilled to skilled and evolving into knowledge workers requires continuous efforts and determination

6. In planning human resource development programmes, the Government is acutely conscious of the changes that are taking place in the environment, especially those impacting on the skill needs of the country.

There are, in fact, tumultuous changes taking place around us, be it in the social, technological, economic or political contexts. These changes are particularly due to the combined effects of economic and political liberalisation and rapid advancement in information and communication technologies (ICT). Major changes, therefore, would be required to the format and content of education and skills training to meet the needs of the changing environment. Large investments in retraining programmes wilts be necessary to make Malaysian workers multi-skilled and versatile.

Skill Training by The Public Sector

7. As outlined by the Malaysia Incorporated concept, there is a need for a system of cooperation between the Government and the private sector in order to achieve progress through shared benefits.3) In this symbiotic relationship, the private/business sector is expected to play as the main engine of growth of the national economy. Nonetheless, the Government must function efficiently to support the synergy that leads to a deliberate and direct involvement in the planning of human resource development in the country

8. The Government continues to play a strong role in strengthening the education and skills acquisition of the population. For its part, the Government has accorded high priority to education and skill training by allocating RM5,923 million or 54.2 percent of the social services development expenditure for Budget 2004.4) This is an increase from RM3,907 million or 49.4 percent of the social services development expenditure of the revised estimate for the year 2000. The large allocation for education and skill training over the years is due to its valued importance for the development of the nation as a whole.

---

3) The Malaysia Incorporated concept was promulgated by the Prime Minister, the Honourable Dato Seri Dr. Mahathir bin Mohamad in 1983 to be included as the foundation bases of national development. See Ahmad Sarji Abdul Hamid et al., eds. (1993).

4) Ministry of Finance, Malaysia, Economic Report 2000/2001

9. In the public sector, four Ministries are highly involved in providing skill training i.e. Ministry of Education (MOE), Ministry of Entrepreneur Development (MOED), Ministry of Youth and Sports (MOYS) auld Ministry of Human Resources (MOHR).

10. The MOE manages the school system involving six years of primary education, five years of secondary education, two years post-secondary education and three to four years of tertiary education, Upper secondary students are channeled either into the academic, technical or vocational streams. To expand the supply of skilled manpower, the MOE continues to increase intake into the technical/vocational schools. There are currently 84 technical/vocational schools with a capacity of 23,659. In view of the need for more science and technical manpower, there are twelve polytechnics Under the MOE with a capacity for 23,265 students. The MOE is also building another four new polytechnics with a capacity for an additional 14,400 students. Polytechuics offer specialised courses at both certificate and diploma level to expand the supply of the workforce for technical and mid-level executive position. Furthermore, beginning July 2001 , the MOE, will be operating community colleges that offer courses in engineering, information technology and vocational training at certificate and diploma levels. Within one year, this project is estimated to have 11 community colleges in various places nationwide with a capacity of 600 to 1,000 students per college. Eventually, the community college will be set up in every parliamentary constituency.

11. The Council of Trust for the Indigenous People (MARA) under the MOED is also actively involved in providing vocational and skill-based training, The MOED manages twelve Institute Kemahiran MARA (IKM's) and 137 Pusat Giat MARA that are located throughout the country to provide basic skills training, especially for rural youths. The MOED will expand the existing IKM's by adding in new programmes, workshops and classrooms. Concurrently, the MOED is completing the construction of the four new IKM's approved under the Seventh Malaysia Plan, 1995-2000. In addition to that, five more new IKM's will

be built under the Eight Malaysia Plan, 2001 -2005. These expansion exercises will lead to an increase of the capacity of the IKM's from 10,000 to 25,000 students per annum.

12. To meet the needs for higher skilled manpower in new skill areas at higher levels and to take advantage of the cutting-edge technology in developed countries, the MOED also establishes co-operation with industrialised countries such as Germany, United Kingdom and France to set up advanced skill training institutes. There is a German-Malaysian Institute (GMI) with a capacity for 700 trainees, a Malaysia-France Institute (MFI) for 1,000 trainees and a British-Malaysia Institute (BMI) for 1,070 trainees. These institutes offer advanced skill training courses, particularly in industrial technology at the diploma level.

13. Under the MOYS, the skill training programme is objectively designed to adhere to the Government's efforts to increase skill supply at all skill levels among youths. The aim of the programme is to provide sufficient opportunities for youths to successfully enter the job market and subsequently to the mainstream of the national socio-economic development. The MOYS focuses on the training of the basic and medium skills for various vocational fields.

14. As part of the non-institutionalised skill training programme, the MOYS offers a variety of skills such as Information Technology (IT), basic service and hospitality and automotive engineering through weekend courses at all Youth 3nd Sports Complex throughout the country. By the year 2005, the programme is projected to have 7,000 participants. In order to upgrade the skills of youths, the MOYS also provides training through the national youth skill institutes. Currently, there are seven Youth Skill Training Institutes (IKBN's), including the National Advanced Skill Training Institute (IKTBN). The clearly capacity of these IKBN's is about 3,000 trainees. However, with an addition of thirteen new IKBN's built under the Seventh and Eight Malaysia Plan, the training capacity is expected to increase up to 16,580 trainees by the year 2005. The IKBN's offer training for numerous trades inclusive of mechanical, information and

communication technology (ICT) and hospitality. In its efforts to widen the opportunity of training for youths, the MOYS has also formed a strategic alliance with the private sector in order to implement the apprenticeship programme, particularly in the service sector such as in the hotel industry and food and catering.

15. The Ministry of Human Resources (MOHR) continues to increase the capacity of its Industrial Training institutes (ITIs) and Advanced Technology Centre (ADTEC). The Ministry established five new ITIs and four ADTECS as well as the Japan-Malaysia Technical Institute (JMTI) under the Seventh Malaysia Plan. The new institutes under the MOHR will focus on training for the manufacturing and information technology sectors. In line with the objective of strengthening linkages between training and technological change, the courses offered at these institutes have been determined on the basis of the requirements of the various industry clusters under the Second Industrial Master Plan, 1996-2005 The focus of the courses is primarily on mechanical and production technology, electronic and electrical technology, including information and communication technology (ICT) and related trades.

16. Other than setting up new institutes, the existing institutes are also being upgraded which include nine ITI's and one Centre for Instructor and Advanced Skill braining (CIAST). With the completion of these projects in 2001, the combined capacity of training institutes under the Ministry will increase from 4,000 trainees to 17,000 trainees. Under the Eighth Malaysia Plan, the MOHR is planning to further increase training capacity to 46,800 trainees with the construction of an additional 18 new training institutes.

17. With the expansion of training institutes, more Malaysians will therefore be provided with the opportunity to acquire industrial skills as well as higher order cognitive skills. Those with basic skills will be afforded the avenue to upgrade their qualifications, even up to the equivalent of university education. The aim is to produce that particular breed of workers who are equipped with

knowledge as well as hands-on skills to operationalise the deployment of knowledge in the Malaysian economy

Skill Training by The Private Sector

18. In the effort to make Malaysia the centre of excellence in human resource development for the region, the private sector is expected to play a more active role in providing skill training facilities. The involvement of the private sector supplements the Government's efforts in expanding skill training facilities at all levels. Basically, there are three modes of ownership and operation of private training institutions, namely:

i) Private Technical Training Colleges

Private technical training colleges are run on a commercial or cost-recovery basis. Although these colleges focus primarily on pre- employment training leading to certificate and diploma levels, they also provide customised or modular courses for industry.

ii) Industry-Based Skills Training Centres

Private firms through their respective-industry associations initiate industry-based skills training centres to provide mostly post-employment training specific to industry needs

iii) Firm-Based Skills Training Centres

The larger firms, particularly the foreign and local multinationals establish training centres to cater primarily for their own in-house training needs. The training programmes concentrate on the post-employment training for firm-specific training requirements. However, the programmes aim to do more than just to improve business results, but also to enhance the employees' knowledge and capabilities.

19. Through the concept of smart partnership in human resource development, other training institutions were also set up into two modes as follows:

i) State Skills Development Centres (SSDC's)

The SSDC was estabfished on the basis of close co-operation between the private sector and the Federal Government as well as the State Government. The Federal Government provides launching grant for the purchase of machinery and equipment, while the State Government provides land for building the premises. The private sector in turn is entrusted to manage the institute including making available their personnel to teach at the Centre. The focus of the centres is to provide the necessary training for core skills and to upgrade skill levels of those in employment to prepare them for technological upgrading. Penang Skills Development Centre (PSDC) is one of the best model of successful SSDC in Malaysia.

ii) Foreign-Assisted Training Institutes (FATI's)

As a result of the introduction of new technologies, FATI's has been established as an advanced training centre to produce competent manpower with advanced skills in specialised trades. At present, these institutes are established with the co-operation of Germany, United Kingdom, France and Japan, The German-Malaysian Institute (GMI), the Malaysia-France Institute (MFI) and the British-Malaysia Institute (BMI) are administered by the MOED while the Japan-Malaysia Technical Institute (JMTI) is under the MOHR.

Human Resource Development Current Priorities and Policy Issues

20. Malaysia undertook a major restructuring of its vocational and skills training system based on the recommendations of the Cabinet Committee on Training in 1991.[5] The three principal objectives of the policy reforms were:

i) Improving the responsiveness of public training to market demand;
ii) Expanding the role of the private sector; and
iii) Strengthening linkages between training and technological change.

21. In the face of constant changes, the competitiveness of industries depends highly upon the country's ability to undertake structural adjustments. For countries to make headway, the skill delivery system must be sensitive to market needs that requires a greater collaboration with the private sector. Not only does the country need a concerted effort, but also a single-minded determination by all parties concerned,

22. The search for more effective framework for vocational and skills training in Malaysia resulted, amongst others, in the decisions of the National Vocational Training Council (NVTC, under MOHR) to overhaul the National Occupational Skill Standards and Certification System in December 1992. Central to the sweeping changes made then were:

i) Adoption of a new 5-level Skills qualification Framework or Sijil Kemahiran Malaysia (SKM) to replaced the existing 3-tiered (Basic, Intermediate and Advanced) skill certification system; and

ii) Introduction of the Accreditation Approach in National certification in price of the trade testing system.

23. The reforms were fundamentally geared towards improving the quality and productivity of the country's skilled workforce, thus enhancing the competitive position of the Malaysia economy at large. The changes also sought to co-ordinate more effectively the diverse vocational and skills training activities carried out by both the public and private sectors in the country, and to gear them towards

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5) Economic Planning Unit, Prime Ministers Department and Ministry of Education, Malaysia, Report of the Cabinet Committee on Training: Training for Industrial Development - Challenges for the Nineties, 1991.

meeting the actual needs of the Malaysian industry. The basic thrusts of the reforms were:

i) To reinforce the adoption of Competency-Based Education/ Learning (CBE/L) principles in the skills training in Malaysia; and To make the National Skill Certification System in Malaysia more flexible accessible and user-friendly

ii) To make the National Skill Certification system in Malaysia more flexible, accessible and user-friendly

24. The introduction of SKM, where trainees can pursue skill training from certificate level 1, 2 and 3 up to diploma level 4 and advanced diploma level 5 which will be equivalent to a bachelor's degree in the academic stream is a major innovation in the skill training system. The establishment of industry-fed national skills recognition system seeks to identify core skills of key industries and accelerate training and certification of job skills. This recognition system through the use of skills standards acts as a motivating factor towards participation in learning. The skill standards enable employers and workers to assess skill competencies and to focus training needs based on provision of specific job skills. Acquiring recognised standards enhances workers' professionalism and quality of work in which reads to employability. This makes skills upgrading more cost-effective and flexible.

25. The competency levels of the SKM meet the prescribed standards of the National Occupational Skills Standards (NOSS). The Ministry of Human Resources (MOHR) through the NVTC develops the NOSS in collaboration with experienced workers and practitioners from industries and instructors from training institutions in order to create definitive workplace skills and standards.

26. The NVTC has currently developed 456 National Occupational Skills Standards (NOSS) covering 36 major occupations in industry, including those involving new and advanced technologies. The NOSS forms the core of training

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curriculum of public and private skill training institutions. The NOSS is reviewed periodically in consultation with industry. This programme of NOSS development is undertaken within the context of the 5-level SKM Skills Qualification Framework Thereby, a career path for the skilled workers is established. Recognition of higher achievement inspires individuals to pursue learning endlessly.

27. In view of the expected increase in the demand for skilled manpower, the NVTC is gearing to speed up the development of NOSS, particularly for advanced level skills as well as new emerging trades. The NVTC is looking at new approaches such as acquiring training standards from advanced countries for adaptation to local needs, interacting closely with private sector and engaging experts from industry to expedite the development of NOSS. At the same time, a National Skill Development Act will be promulgated to enhance the role of the Council in promoting skill development, without imposing burden on the target clientele. The proposed Act provides for-the registration and accreditation of skill training providers in order to promote the development and improvement of the vocational skills of the workforce. Through promotional measures, the Act will enhance the quality of training provided to the Malaysian workforce.

28. The NVTC currently administers the Malaysian Skill Certificate (SKM) Scheme through 460 accredited training institutes in which 62 percent (284 institutes) are private skills training providers These institutes have been accredited by the NVTC to conduct 2,282 SKM Programmes from Level 1 to Level 5, Thus far, 110,000 certificates have been awarded under this competency-based scheme. For the future, the MOHR will be working to further develop this scheme, in particular towards establishing competency standards for higher-level skills as well as new trades that are emerging following advancements in technology. It is essential that the SKM scheme be given due support, particularly by way of recognition of the certificates for purposes of employment in the public sector as in the manner that it is increasingly being accepted by the private sector. The NVTC has been directed to widen the SKM scheme to relevant areas that support the needs of industries and also to review the contents to suit changing needs.

29. High priorities continue to be given to human resources development, particularly in preparing trained and qualified skilled workforce to support the country's development. The introduction of SKM with more flexible framework of national skills recognition and qualifications has been deemed necessary to promote a national 'training culture' which is more conducive for personal motivation of skilled workers, thus loading to the overall-upgrading of competencies amongst the country's skilled workforce.

30. For the skills development programme to thrive in the new millennium, current legal and regulatory obstacles involving education and training need to be addressed urgently for the sake of the nation's development. The existing parameters have created barriers to collaboration and shared systems that hinder the progression of skills development in the country, against larger social and economic goals. Such regulatory framework should be reconsidered so as to be more facilitative and flexible in nature.

Further Measure to Promote Human Resource Development

31. The strength of the manpower capabilities hinges on how fast workers adapt to changes and developments in the job requirements.

Workers, therefore, need to possess the updated knowledge, relevant and new skills with positive attitudes and sound values in order to compete in the rapidly changing, technologically driven world. The relentless development of the workforce enables the workers to keep pace and stay at the forefront of the progressive transformation

32. In response to the challenges of the new economy in which the generation and exploitation of knowledge play the predominant part in the creation of wealth,6) learning and knowledge-creation must be made of prime importance. In the knowledge economy (K-economy), people must be equipped with the

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6) See the Minister for Information Technology's IT Advisory Group (1999).

abilities to be dynamic and innovative. Consequently, constructive measures are taken to facilitate the human resource development process

33. Apart from the physical development of the training infrastructure, the Government has also set up the supporting system promoting the skill development in the country. Going back to the Human Capital theory, there is a definite cost attached to the knowledge and skills acquisition. Due to that, the Government has established the Skill Development Fund (SDF under MOHR) to assist individual who are in need of financial assistance to undergo skills training. The fund will cater for the needs of school leavers who intend to pursue skill-based careers such as in engineering design as well as in ICT. A flexible long-term loan facility with a low administrative charge is being offered. This will help to alleviate the constraints to learning and skills upgrading and further induce more interest for learning. To further lend a greater support to lifelong learning, the SDF will also provide opportunity for those already at work to acquire new skills and qualifications on their own accord. Accordingly, the financial assistance will also be available for those intending to undergo training on a part-time basis.

34. Knowledge and skills upgrading is a shared responsibility of both the public and the private sector. In order to ensure that human resources are optimally and efficiently utilised, there should be a greater private sector involvement. As a result, employer-driven retraining is critical. This is to ensure a profitable match between training and the requirements of industry. In this regard, more than 2.7 million training places involving a financial assistance of RM852 million has been approved under the Human Resources Developlnent Fund (HRDF) for the retraining of the workforce. To align the retraining effort to the needs of the new economy, the rate of financial assistance under the HRDF has been increased to 100 percent for craft, technical, IT, productivity and quality-related skills.

35. The measures taken to re-skill and upgrade the workforce help to create a smooth transition in the labour market. This has been demonstrated

during the economic slowdown in 1998 in which the unemployment rate was relatively low of 3.2 percent[7]. The unemployment rate went further down to 3.0 percent in 1999 and 2.9 percent in 2000. The labour market stability indicates its ability to absorb the impact of the economic crisis by continuing to maintain full employment. For the most part, the labour force agility can be attributed to the retraining of workers in new skills that increases occupational mobility and allows greater flexibility for organisations to restructure and readjust their workers. The Government's influence in coordinating the demand and supply of skills through education, training and economic policies enables workers to adjust quickly to the changes.

36. Labour market information has always been regarded as crucial to the planning of the human resource development. The K-economy and the changes in technology, as well as workplace practices that come along with it, make labour market information even more important not only for policy makers, but also for individuals making career choices, employers seeking workers, as well as education and training providers planning courses and curriculum to meet demand. Information, thus, acts as the lubrication for the efficient functioning of the workers in the labour market. Hence, to increase the flexibility of the workforce, the MOHR is seeking to leverage ICT by setting up an Electronic Labour Exchange (ELX) Apart from upgrading job-matching services to employers and job seekers, this project will also improve the availability and qualify of labour market information.

Up-to-date labour market information will assist people in making better decisions about their careers, including training needs. The ELX will also enhance the mobilisation of the nation's human resources in response to changing market needs.

Ministry of Human Resources
MAlAYSIA
May 2001

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7) Ministry of Finance, Malaysia, Economic Report 2000/2001

자유 토론

· The National Qualification System for Linking Schools and Workplace

/ Ms. Annie Bouder

Q 자격 취득후 고등교육기관으로의 진학 가능여부와 활용도는 ?

A 대학진학을 위한 입시에 반영되고 있으며, 많은 학생들이 자격을 취득한 후 대학에 진학하고 있음.

Q 정부와 정부관계자가 자격 기준 개발에 참여하고 있다고 하였는데, 자격기준의 승인 주체는 누구인가? 또한 민간부문도 자격기준을 개발하고 자격제도 개선에 참여하는지 ?

A 자격기준의 개발은 노조, 경영자 협회의 참여하에 이루어지고 있고, 민간자격은 전문분야에서 국가자격에 상응하도록 활용되고 있음.

Q 프랑스에서 외국 이민자나 난민에 대한 경력 인정 정도는?

A 이민자나 난민의 경력을 인정해주는 것에 대한 정확한 데이터는 집계되어 있지 않음. 또한 이민자라는 표현도 잘 사용하지는 않으나, 이들에 대한 경력은 인정하고 있음. 현재 관련 법령이 정비중에 있음. 모든 사람의 경력인정 신청이 가능함.

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Q 한국의 자격검정에서 대인관계능력 등 기술분야 자격이 아닌 능력에 대한 평가는 시행하지 않나?

A 질문내용은 key skills에 관한 것으로 현재 이러한 능력의 인증을 위한 제도 도입을 검토중에 있음.

Q 기술자가 자격증이 있어야 자신의 분야에서 근무가 가능한지, 그리고 자격증 이외에도 자신의 능력을 인정받을 수 있는지?

A 특정분야의 경우 자격증의 소지가 필수적으로 요구되고 있음. 이 경우 자격증은 면허(license)의 성격을 갖게됨. 그러나 이러한 직종 이외에는 자격증의 소지가 근무를 하는 데 필수적으로 요구되지는 않음.

Q 자격분류체계가 ILO의 경우 semi-skilled/skilled/technician/technologist 등으로 분류하고 있고, 한국은 기술사, 기능장, 기사, 산업기사, 기능사 등 5단계로 구분하고 있어 차이가 있는데, 자격 분류방식을 ILO의 분류방식으로 조정할 방안이 있는가? (오만)

A technician은 산업기사에, technologist는 기사 수준에 해당하는 등 대체로 한국의 자격은 ILO의 분류방식에 상응하도록 비교가 가능하고, ILO의 기준으로 일치시키는 것은 어렵지 않음.

- **National Qualification System in Lao P.D.R.** */ Mr. Silamay Sopraseuth*

Q 본인이 근무하고 있는 센터의 설립년도와 직업교육훈련 체제의 설정시 외국으로부터의 도움을 받은 내용은?

A 센터는 1997년에 설립되었고, 독일 등 외국으로부터는 교육과정, 교원훈련(특히, 농촌지역파견 훈련) 등에 자문을 받음.

Q 학교교육의 시작시기와 교육연한은?

A 초등학교를 6세에 입학하여 5년, 중학교 3년, 고등학교 3년 등 보통교육이 11년간이고, 의무교육임.

- **National Skills Certification System in Malaysia**
- **Human Resources Training Programme in Malaysia**

/ Mr. Sahar Darusman

Q 기존의 3단계 자격에서 5단계로 변화한 이유는 산업계의 수요에 부응하기 위한 것인가?

A 산업계의 수요에도 부응하기 위한 것이고, 4단계는 diploma, 5단계는 degree에 상응하도록 구성하기 위하여 개편하게 되었음.

※ 종합토론

- APEC Engineer를 볼때도 엔지니어링 분야의 자격에 대한 국가간 상호인정은 어느 정도 활발하게 이루어지고 있음. 그러나 이 분야 이외에 세계적으로 공통된 자격체제의 구축을 위한 시도는 아직은 없는 것으로 보여짐.
- 필리핀에서는 학교를 졸업한 이후에도 공인된 자격증을 취득하고자 하는데, 이는 해외에 취업을 하고자 하기 위한 요구 때문임. 아시아에서 통용

되는 자격이 도입될 필요가 있으며 이는 근로자의 기술수준의 향상을 가능하게 할 것으로 생각됨.

- EU에서는 25년전부터 공통자격제도의 도입을 위한 시도를 하여 왔으며, 각국의 자격의 투명성 확보를 위하여 노력하여 왔음. 국가차원의 HRD를 위해서는 자격기준의 개발 이에도 많은 노력이 필요함. 그동안 EU의 여러 나라에서 각국간에 통용되는 자격제도의 도입을 위하여 노력하여 왔고, 현재도 시도하고 있으나 그 성과에 대해서는 결론을 내리기 어려움. 자격과 교육훈련은 각국의 문화적 상황에 따라 차이가 있을 수 밖에 없다는 점을 인식하여야 함.

Ⅵ. 인적자원개발을 위한 국가 전략

1. 주제 발표

- **Vocational Education and Training in the UK**

  ……*Dr. Brendan Barker*

- **National Human Resources Planning: Issues and Problems**

  ……*Dr. Ki-oh Jeong*

2. 자유 토론

Vocational Education and Training in the UK

Dr. Brendan Barker

Introduction

In recent years, the UK economy has performed particularly well. Reflecting this success, the UK has among the highest employment rates and lowest unemployment rates in the OECD. This economic success has been underpinned by a remarkable transformation in the educational achievement of UK workers. Many more young people now stay on in education and training. The proportion of 19-21 year-olds with level 3 - intermediate - qualifications has doubled and the proportion of 22-24 year-olds with degrees has increased from 1 in 8 to 1 in 5.

Nevertheless, the UK still faces major challenges. UK productivity is lower than in many other advanced economies: output per UK employee is 42 per cent below that of the American worker and 14 per cent below that of their French and German counterparts.

There are many deep-seated and historical reasons for this productivity shortfall. In part it reflects lower investment in physical capital. But in part it also reflects less investment in human capital-a less well-educated, less well-trained workforce.

For many years vocational training in the UK has been neglected in favour of more 'academic' routes through the education system. As a result, it is widely acknowledged that the general skills base in the UK has fallen behind that of our European counterparts.

Recent years have seen great changes in the provision of vocational and education training in the UK. The primary purpose of the reforms is to radically improve the education and training available to young people and adults and, particularly, to secure an excellent system of vocational and technical education fit for the Twenty-first century.

This is vital if the UK is to meet critical skills shortages that employers currently face. Research for the National Skills Task Force showed that the occupations with the highest level of skills shortage vacancies were craft and skilled trades and associated professional and technical jobs, which accounted for 22% and 17% of all skills shortage vacancies reported respectively. It showed that craft and skilled trade jobs require 120,000 new entrants every year. The Construction Industry Training Board predicts a requirement for 29,000 new plumbers and 35,000 new electricians over the next five years. This is a real skills challenge to our schools, colleges and training providers.

Training benefits both firms and their workers. Research by the Institute for Fiscal Studies (IFS) tells us that, other things being equal, even short periods of training appear to raise people's wages by about 5% over quite long periods of time. Employers also gain a lot from training their employees.

Recent research, also from the IFS, suggests that a 5% increase in the proportion of employees trained is associated with a 4% increase in productivity within the firm.

This type of result is confirmed by research from the Centre for Business Research at Cambridge University. It shows that between 1987 and 1995 small and medium-sized enterprises offering sustained training to their employees fared better in terms of employment growth than those firms which did not train their employees. The strong, positive impact of training on growth was closely associated with good human resource practices including quality circles, job rotation or performance-related pay. Importantly, this study demonstrates that the positive relationship between training and performance is not simply a matter of the more successful firms having the capacity to offer training; it concludes that training does provide a positive impetus to employment growth.

We live in a competitive world where individuals need to raise and maintain their skills to enhance employability and businesses need to invest in learning and training to improve productivity and competitiveness.

Lifelong learning is key - people need to get the habit not just of acquiring a good basic education but of continuing to learn throughout their working life. A vital element is good quality qualifications, that are recognised and valued by individuals and employers.

Historical Background

In the past, the UK failed to develop high standards and esteem for vocational and technical education to match the excellence of our academic education. In the 19th century, the state of technical education was criticised repeatedly, most notably the Samuelson Royal Commission on Technical Education of 1882-84. Yet subsequent progress was very limited, and as historians of this period have noted:

"The pattern of technical education that developed in the nineteenth century was not only institutionally marginalised from mainstream education; it was also intellectually adrift. Whereas in most of the more advanced northern mainland European countries, such as France and Germany, technical education was allied to general education, in Britain a sharp divide grew up between the two, separating skills and knowledge."

This divide was cemented in divisions between government departments and agencies that persisted throughout the 20th century. The Board of Education created in 1900 was to remain separate - as the Ministry or Department for Education and Department for Education and Science - from the Ministry for Labour and Department for Employment for almost the entire century.

Only in 1995 were the departments brought together into a single Department for Education and Employment. This merger was consolidated following the General Election in June 2001 with the establishment of a new Department for Education and Skills with a remit to support the creation of a better educated and more highly skilled workforce.

Similarly, despite advances in the 1918 Fisher Act, and the 1944 Butler Act (which for the first time required local education authorities to provide further education), vocational and technical education failed to develop clear, high-standard qualification routes or institutions of study, linked to both schools and the labour market. Curriculum and qualification authorities for academic and vocational qualifications, and funding channels for post-school education and training, remained split.

The integration of the departments for education and employment provided, for the first time, an institutional platform for overcoming this historic legacy. Past reforms had been piecemeal or limited. Now, for the first time, it was possible for the planning and funding of all post- compulsory learning below higher education to be fully integrated, cutting down on duplication, overlap, and wasteful competition, and providing the effective co-ordination and strategic planning mechanism needed to maximise the contribution of education and training to economic performance.

Soon after the merger of the Education and Employment Departments, the Qualifications and Curriculum Authority (QCA) was established to bring together vocational and academic study and qualifications.

The Qualifications Curriculum Agency was created in 1997 through the merger of the National Council for Vocational Qualifications (NCVQ) and the School Curriculum and Assessment Authority (SCAA). QCA has a wider remit than any previous education or training body, including pre-school learning, the national curriculum for 5-16 year olds, national tests for 7, 11 and 14 year olds, GCSEs, A-levels, GNVQs, NVQs and higher level vocational qualifications.

QCA can co-ordinate education and training more effectively than was possible than in the past, allowing the UK, for the first time, to bring together academic and vocational qualifications of all kinds.

The Scottish Qualifications Authority (SQA) was set up in April 1997 following the merger of the Scottish Vocational and Education Council (SCOTVEC) and the Scottish Examining Board (SEB). Unlike QCA, it has both accrediting and awarding body responsibilities.

The creation of the Department for Education and Employment - and subsequently of the Department for Education and Skills - also made possible the establishment of a new Learning and Skills Council (LSC) - undoubtedly the most significant and far reaching reform ever enacted to post-16 learning in this country, and whose very purpose will be to bridge the historic divide between academic and vocational education, and to match learning to employment needs at national, regional, sectoral and local level.

The Learning and Skills Council (LSC) became fully operational on 1 April this year. Replacing the Further Education Funding Council and Training and Enterprise Councils it is at the forefront of a radical reorganisation of post-16 education and training. It was established following recommendations in the Learning to Succeed White Paper of June 1999 and became a legal entity under the Learning and Skills Act 2000.

The LSC is responsible for all post-16 education and training excluding higher education. This includes further education, work-based training, adult and community learning and, from 2002, school sixth forms. It operates through 47 local Learning and Skills Councils, which deliver national priorities at the local level. Nationally and locally, the councils are business-led, with 40 percent of board members, the national chair and the majority of local chairs being drawn from the commercial sector.

The aim of the LSC is to simplify the organisation, planning and funding of post-16 education. It will reduce bureaucracy and duplication, and provide a more co-ordinated focus on the nation's learning and skills needs, from basic literacy and numeracy to the high tech requirements of the information age.

With an emphasis on excellence and diversity, it will also improve the quality of education and training and provide a wider range of learning opportunities, including for people with special needs.

The LSC has been given four key priorities. These are:

- encouraging young people to stay on in learning
- increasing demand for learning by adults
- maximising the contribution of education and training to economic performance
- raising standards.

The LSC is also at the forefront of other Government initiatives, such as:

- reforms to modern apprenticeships, in the form of a broader knowledge base to vocational training, an increase in the number of apprenticeships, an emphasis on growth industries, and new entitlements to modern apprenticeship places
- the promotion of new forms of vocational learning in schools, including up to 40,000 part-time vocational placements a year for 14 to 16 year olds in further education colleges
- the development of Centres of Vocational Excellence in further education colleges, in specialisms such as electronics, ITC and design and technology

- staff development in further education colleges, through the investment of up to £80 million from the Standards Fund
- the establishment of at least two technology institutes in each region, as outlined in The Knowledge Economy White Paper of February 2001, to boost the supply of high tech skills and expand research and development
- the development of closer links between education and business and of targets for improving the skills levels in the workforce-these targets will be outlined in a workforce development strategy consultative document in June 2001
- implementation of the Government's adult literacy and numeracy strategy, which aims to reduce the number of adults with these problems by 750,000 by 2004.

In its first year of operation (2001 to 2002) the LSC will resources in excess of £5.5 billion. This is a £600 million cash increase or a 9 percent increase in real terms funding, and will enable schools, colleges and private training providers to increase participation and drive up standards. The provisional funding allocation for 2002 to 2003 gives a further cash increase of £400 million; a further 5 percent increase in real terms. (This does not include the additional funding that the LSC will receive when it takes over responsibility for school sixth form funding.)

47 Local offices. Each local LSC will be responsible for an average budget in excess of £100 million and for the education and training of over 100,000 learners.

The LSC will secure a major step forward in encouraging more young people to stay on in learning until at least 19 and to achieve at least a level 2 qualification. It will increase the demand for learning by adults. And it will raise the skill levels of the working population as a whole, including helping those adults who lack even the basic skills needed for employment. The old departmental structure would have been incapable of effecting this reform. It did not recognise either the unity of purpose in the further education and training and

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enterprise funding systems, or their joint role in the economy, and served neither employers nor learners

The Role of Industry

A competitive economy will include firms that undertake a great deal of training without any government intervention. Government estimates suggest that, taking all costs into account, firms in the UK spend over £15 billion a year on training and individuals fund one sixth of all off-the-job training themselves.

Nevertheless, there is a systemic culture of under-investment in skills in the UK. Left to their own devices firms and individuals will not engage in an optimum amount of training, for three key reasons:

- on the firm's side many of the skills that are needed are general skills, required by more than one company. So if a firm invests in training workers, they can easily end up seeing other firms reap the rewards;
- for individuals, information problems are often daunting. It is hard for them to know what skills are likely to be required and what the costs and benefits to them of acquiring those skills will be;
- finally, there are benefits to the economy from the possession by firms of trained workforces that run wider than individual firms will realise.

This provides an economic rationale for government intervention. The government needs to intervene where the levels and types of training produced by the free market are sub-optimal.

Tried to do this through industrial training bodies.

In the mid-1960s, the then Government made the first moves towards a structure of employer representation. A network of Industry Training Boards

(ITBs) was established. ITBs were given the power to raise a levy from companies within their defined sectors. The levy was to be used to further vocational education and training.

Originally there were 24 ITBs. Some were extremely successful (in fact the descendants of the successful, original bodies are still part of the scene - under different rules, today).

When the Conservative Government took office at the end of the 1970s, however, its view was that a statutory levy was not an appropriate method of funding sectoral training arrangements, and that a voluntary system should be introduced, led by employers in each sector.

The result was that some of the ITBs were wound-up while others that had been more successful, agreed to continue to have a statutory training levy. Others developed voluntary levy arrangements.

During most of the 1980s, therefore, sectoral training arrangements were conducted either by statutory ITBs that had been approved by their sectors, or by what were called "Non-Statutory Training Organisations (NSTOs). Gradually, over the decade, all of these organisations became known as Industry Training Organisations (ITOs).

In parallel to these developments - from about 1986 onwards - came the development of occupational standards (the basis of NVQs and SVQs). This process was led by Lead Bodies. Some of these were separate organisations, some were part of ITOs and others formed themselves into Occupational Standards Councils (OSCs).

By the mid-1990s - and with the expansion of the NVQ/SVQ system - this plethora of organisations had become extremely confusing for business people. There were over 170 organisations doing very similar work but, in some cases, with different titles and memberships. The Government took the decision, therefore, to rationalise the arrangements. All existing ITOs, Lead Bodies and OSCs were provided with a detailed prospectus containing new criteria and were invited to apply for recognition as NTOs - National Training Organisations.

That process started in late 1996 and culminated in the launch of the NTO network in May 1998. The result was a network of organisations that was larger, stronger and it was hoped more strategic than the bodies that they replaced.

The network of National Training Organisations (NTOs) brought together employers, Government and the world of education and training to define and take forward a focused agenda for skills. Their work ranged from assisting in the development and implementation of national and regional policies on learning and skills, to assessing the skills needs and impact of their sectors and developing practical solutions to training problems on behalf of their industries.

72 NTOs are currently recognised by the government, each representing an individual industry (such as construction or hospitality), or occupation that affects all sectors (such as information technology or management). NTOs cover the whole of the UK. They are owned and supported by employers and serve organisations of every size.

NTOs were given a key role in the new learning and skills infrastructure announced with the publication of the Government's Learning to Succeed White Paper in July 1999. Employers, through their NTOs were to be major players in advising on skills and employment needs at regional and national level, through Regional Development Agencies and the new Learning and Skills Council which is came into being in April 2001.

In October 2001, Estelle Morris, the Secretary of State for Education and Skills announced that the Government was inviting employers to set up a UK-wide network of Sector Skills Councils to identify skills shortages and deliver action plans to tackle them across sectors.

The Sector Skills Councils will be created by business for business. Governments across the UK recognise that employers are best-placed to identify where there are gaps in the skills of their workforce and equally well-placed to create strategies to close these gaps. People are our greatest economic asset, and the skills they possess are the key to raising the UK's productivity.

We want employers to be centre-stage in decisions about skills, business development and productivity performance. Sector Skills Councils will be the main way employers can influence the skills agenda. They will build on the best of the current National Training Organisations which will cease to be recognised by the Government in March 2002.

The UK's economy is the fourth largest in the world and the workforce covers a huge range of sectors within the voluntary, private and public spheres. We are not going to be prescriptive about the number of Sector Skills Councils but we do not expect every employment sector to have one, and some will cover more than one sector. Sectors that do not have a Skills Council will be served by the new Sector Skills Development Agency that will oversee the functions of all Councils.

Each Council will have the task of addressing the key concerns of its sector. They all have different skills needs and the Sector Skills Councils will be a reflection of this - but they must have the backing of key sector employers - whether small or large - and all will need to develop world-class national occupational standards, such as Modern Apprenticeships. Most importantly all will be judged by the same, measurable criteria:

- Reduction in skills gaps and shortages;
- Improved productivity and business performance;
- Increased employment across the sector's workforce; and
- Improved training frameworks and standards.

The Sector Skills Councils will work in partnership with other organisations such as trade unions, Regional Development Agencies, the Connexions Service and the Learning and Skills Councils to improve the standards of vocational training and workforce development. Regionally, we are already doing excellent work but until now, we have not given enough consideration to the equally important approach of looking at our needs sector by sector. If we do this, working in partnership with employers, we can transform our skills base.

The creation of the LSC in England, along with comparable bodies in the devolved administrations, means that training now has a real skills focus. The new Sector Skills Councils will be able to tap into that. They will have a key role to play in helping the LSC achieve its mission to raise the skills level of our workforce to match the best in the world by 2010.

Relevant Qualifications

Up to the late 1970s, the UK had a rigid system of schooling and training. Young people would enter the education system at about 5 years of age and change schools at about 11 years of age. The type of secondary school very much rested on the outcome of one single examination. Those who passed this examination would normally be expected to eventually go on to universities and colleges at the age of 18. For those that did not pass the exam it was assumed that, after a few years more schooling, they would leave and go straight into work. A number would win apprenticeships to train in craft skills ranging from welding to hairdressing, for example. On completing their training these people had a certificate to recognise the skills they had developed.

However, there were millions who left school with few, if any, qualifications, entering a world of work which would offer little or no training, no opportunity to develop themselves and no recognition for any competencies they did develop.

The traditional apprenticeship system started to collapse. Young people failed to find training, skill shortages arose, businesses, the national economy and the UK's competitiveness suffered. It was clear that something had to be done.

In 1981 the Manpower Services Commission (a predecessor to the DfEE) made its first statement about competence-based standards and qualifications, published as 'A New Training Initiative'. Two of the main themes of that document were about occupational standards and young people. From that point, the UK started to develop occupational standards within each industry, with each industry taking responsibility for itself.

Also in the early 1980s, unemployment amongst young people was becoming a serious issue. The existing programme for youth training, funded by the Government, had been expanded but still could only offer uncertificated training which left employers unsure of what these potential employees could actually do, and the trainees often unable to convince employers about the depth, range and quality of what they had learned.

In 1985 the Government published the White Paper 'Education and Training for Young People' announcing a Working Group to review vocational qualifications in England and Wales. The Working Group, chaired by Oscar de Ville, reported its findings to the Government. One of its findings was that there was no effective national system of vocational qualifications; qualifications had evolved rather than been designed. While some industries had highly respected qualifications, others had none.

A system was needed that would recognise the skills people already had, and that was consistent, reliable and well structured. It would allow the skills-base of the country and success in upskilling the whole of the national workforce to be measured. Qualifications needed to be realistic and accessible with scope for progression- and people needed to feel part of the process.

The Government couldn't devise a new system in isolation, nor could it force people into a system through legislation. The key to any system was to have the full support of all involved, be voluntary and be done through partnership.

In 1986 the Government established the National Council for Vocational Qualifications (NCVQ) - (now the Qualifications and Curriculum Authority (QCA) to set up a comprehensive framework of vocational qualifications covering all occupations and industries. The first award - at level two- was made in 1988.

Employers were central - they needed to be persuaded to agree common standards for all occupations within their industries. Also vital were the organisations that actually provided training and awarded certificates. In the mid-1980s, Training Providers and Awarding Bodies could set their own agendas with no regard for the needs of industry, the economy or the national skill needs.

There was a jungle of disparate qualifications - bewildering, of inconsistent value and not geared to the changing needs of individuals, industry or the country. Qualifications needed to be flexible, widely recognised by industry, comprehensive, rigorously assessed, coherent and voluntary - so National Vocational Qualifications (NVQs) were created.

NVQs are critical to developing clear new vocational options for young people, with new forms of vocational education in our schools and expanded apprenticeship opportunities.

Young people choosing vocational study will be able to see a ladder of progression that gives structure, purpose and expectation to their lives, in the same way that a future pathway is clear to those who leave school to gain academic A levels and enter university.

Over 16s in full time education will be able to take forward their vocational GCSEs into programmes of study that are predominantly vocational, or which combine new vocational A levels with academic A levels in a mixed programme of study. And just as we have created broader A level studies, so I want to be sure that vocational programmes are coherent, equipping young people with both broad knowledge and skills, and specialist expertise and competence. I will ask the Qualifications and Curriculum Authority to prepare advice on this issue. I will not tolerate large numbers of young people churning around on courses that are narrow, or which many persistently fail to complete. Weakness in standards and completion rates feed back rapidly to young people as poor quality options, which they then do their best to avoid.

I also intend to have work-based routes which parallel full-time study. The transformation of the Youth Training Schemes into the new Foundation Apprenticeships will enable us to route back into the school, progression routes which provide solid basic skills and lead to level 1 foundation qualifications, giving confidence to youngsters to progress beyond the end of compulsory schooling. Advanced Modern Apprenticeships would then become feasible for those who, over time, have continued their studies whilst in work. In this way, for those for whom full-time study is clearly not appropriate, there would be the opportunity to enter the world of work and continue progressing and maturing in the way which traditional apprenticeships allowed for.

To ensure that the vocational qualification framework is clear, and well understood by parents, young people and employers, the QCA is currently rationalising the plethora of qualifications up to advanced level (level 3). It will complete this task by autumn 2001. The QCA will also ensure that vocational qualifications relate directly to the needs of employers.

The ladder of vocational progression will also lead into higher education for those who meet the required standard. Having reached level 3 through a vocational route, it will be open to young people to study for membership of a professional body or, if they wish, to move on to higher level qualifications.

Later this year, prototypes for new, vocationally-orientated Foundation Degrees will start. They will develop employment skills alongside rigorous knowledge and theory. Many of them will be linked to key areas of the new economy: Internet computing, e-business, software engineering and other high-technology subjects. They will also be available for part-time study by people in work, and indeed, at the workplace. Our future expansion of higher education will be focused heavily on Foundation Degrees, and vocationally-orientated study by those in their twenties. In this way, we are making a reality of the long-cherished aim that individuals should be able to progress through the technical and vocational pathway all the way to a degree. Choosing technical and vocational education will no longer be seen as an option which limits ambitions.

We are also expanding apprenticeship opportunities and strengthening and reforming Modern Apprenticeships as a key option for those young people who want to earn as they learn. Symptomatic of the divide between education and skills development for work was a limited conception of the knowledge and understanding needed for high standard apprenticeships. At their best, apprenticeships have always offered rich and substantial knowledge and skills, gained off-the-job as well as on it. But that has not always been the case in different sectors. So we are reforming the Modern Apprenticeship framework, at both Foundation and Advanced levels, to increase the taught element of underpinning knowledge and understanding needed for the job. An Apprenticeship Diploma will certify the attainment of specialist skills and competence, knowledge and understanding, and key skills.

In line with the above, I therefore intend to create an entitlement to a Modern Apprenticeship for all young people who have the ability, aptitude and enthusiasm for work-based learning. Where young people meet the right entry criteria, they will be entitled to an apprenticeship place. Those who cannot meet the criteria will undertake pre-apprenticeship programmes in what we term the Learning Gateway. This provision will be properly integrated, developed to focus on progression and achievement, and made available to young people by referral from the Connexions Service and other partners.

In essence, the new structure for work-based learning will consist of the Learning Gateway, Foundation and then Advanced Modern Apprenticeships.

These are historic reforms. For the first time, we will have in place a vocational and technical education system that secures high standards, status and esteem. Schools and colleges will be linked to the world of work in new and productive partnerships. Employers will be able to recruit people with the specialist and generic skills they need at all levels of business activity.

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Changes and future prospects of the U.K.'s economy and society

Problems of the U.K.'s HRD systems before introducing new vision, policies and strategies

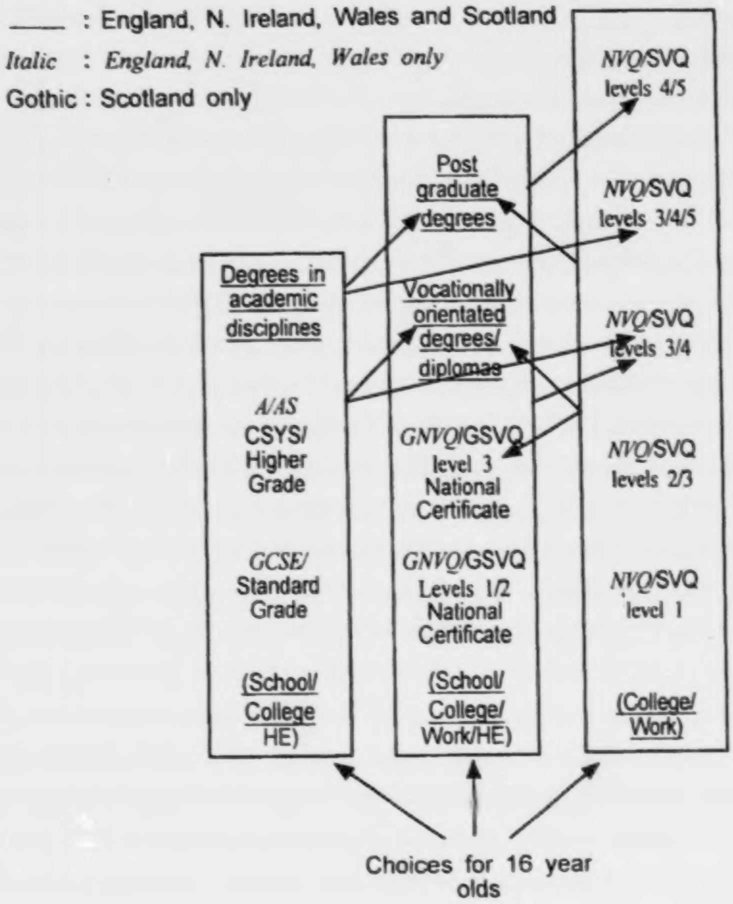
New vision and Goals/objectives

Major policies for training/educating, placing/utilizing, and maintaining

manpower(human resources) needed for the knowledge-based society

Strategies for implementing policies

Policy Implications for other countries


____ : England, N. Ireland, Wales and Scotland
Italic : *England, N. Ireland, Wales only*
Gothic : Scotland only
Post graduate degrees
Degrees in academic disciplines
Vocationally orientated degrees/ diplomas
A/AS
CSYS/ Higher Grade
GCSE/
Standard Grade
(School/ College HE)
GNVQ/GSVQ level 3 National Certificate
GNVQ/GSVQ Levels 1/2 National Certificate
(School/ College/ Work/HE)
NVQ/SVQ levels 4/5
NVQ/SVQ levels 3/4/5
NVQ/SVQ levels 3/4
NVQ/SVQ levels 2/3
NVQ/SVQ level 1
(College/ Work)
Choices for 16 year olds

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National Human Resource Planning: Issues and Problems

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I . Intro

Early stage of this year, Korea launched a work of strategic planning in national human resources(NHR). The planning includes many complicated problems and issues to be reviewed. This paper purposes to expose the major issues examined in the process of the strategic planning for the NHR. At least three important considerations promote the start of government planning in NHR.

Role of Government and Ministerial Relations in NHRD

Ministries are rapidly losing their policy tools as deregulation and non-subsidy become unavoidable principles of government. Instead, the ministries turn their eyes to the human capital formation in their own sectors. At present, human resource development programs spread all across the ministries resultedly getting at one of the biggest portion in government activities. Overall tuning and inter-ministerial discussions now become inevitable for the NHRD.

Increasing Knowledge Demand and Free Trade in Service

Expanded service sector characterizes industrialized economies. In the rising global economy, particularly the emerging free trade in services drove nations to concentrate on knowledge and human capacity building. In Korea, the service sector employment nears 70% of the total jobs, but most still being far behind modern rationalized service. Korean economy, observers consider, already exhausted the source of the past remarkable growth. To build the capacity for further growth necessitates new knowledge and skill bases particularly in service sectors.

Revitalizing Education Reform and Further

From the short experience of education reform since 1995, Koreans felt that school reform was not a job to be taken solely by the education community. By adopting the NHRD angle, educational revisionists can mobilise the comprehensive out-of-school efforts to change schools and society at the same time.

Ⅱ. Conceptual Issues

Planners for NHRD had to overcome some obstacles that confused both educators and policy makers.

Education and NHRD in Post-modern State

Korea is a country that have strong multi-religious tradition without a substantial consensus on the content of humanity. It means that educators always arrive at superficial and even nominal agreement whenever they emphasize the humanity ideal as an important educational goal. The frequenting nominal declaration of humanity ideal therefore has a tricky aspect: such an easy compromise use to effectively cover conflicts in education and lead to damper the revisionist movement.

Educators have put importance upon the moral ideal of virtue humanity and whole person as the foundation of national education. For them, the concept of NHRD seems very doubtful to secularize the state and resultedly to weaken the state committment and support to education. Seeing the transition from the Ministry of Education to the Ministry of Education and HRD, they were much worried if the NHRD should override the legitimate state concerns for education.

To develop the frame of NHRD policy cannot detour the task of consolidating the concepts and ideas imbued in and long cherished by the national education system. Since the rise of the modern history, the nation state has kept education into the core of national foundation. In the same way, the concept of <national education> has been deeply rooted in the Korean system. In this sense, the NHRD policy seems flagging the advent of post-modern state in the field of teaching and learning.

NHRD and Knowledge Management

Knowledge is a concept incorporated deeply into any education systems. Developing the frame of NHRD was not possible without clarifying the relation to the knowledge. Knowledge management(KM) is developing intertwined with the practice of learning organization, which is the case of HRD in businesses. Likewise, KM is necessarily an important part of NHRD.

In fact, one must be reminded, the state has performed the knowledge management activities since the ancient era. One still finds kinds of knowledge inventories credentialed and managed by state agencies. Therefore, one can say, the KM has long been an state activity. In the past, only state can afford it.

Truth is, even the business organizations also felt the necessity of the KM as production and service become refined in the post-industrial economy.

Discussing KM in NHRD led to the examination of the function of knowledges in a society. Some knowledges serve for legitimacy and control, while others for enhancing human performance and power. Sociologists used to expose the former aspect of knowledges. However NHRD must locate the latter role of knowledges in its frame.

NHRD and Social Trust Building

Many business experts in HRD strongly advocate the importance of liberal general education by schools. In the advocacy, they tend to mention the cost-saving and productivity-gaining effects of the liberal and humanity education. It is exactly the same point as the social assets issues many OECD reports have dealt with. Addressing these issues was inevitable in the course of the NHRD frame development.

In the context of Korean society, the social asset issue cannot be separated from the <moral hazard> issues raised in the recent period of structural adjustment, for example, fairness in market transaction, professional standards, and organizational ethics. It was considered particularly important as those modern arrangements as market, rational work organizations, and professions were implanted from western civilization. Korean society still lacks the social trust base underpinning the implanted institutional arrangements. The NHRD policy at the time of structural adjustment should envision the ways to build the social capital.

Ⅲ. Analytic Frame in NHRD: Models

Policy development requires sound analytic bases. For policy makers or analysts seeking the sound analytic frame, very important is to find significant identities and, subsequently, equational relations between the parameters to operate on. Such discoveries then would form the starting point of theories. In the field of NHRD, we have little in terms of perspectives and theories. Only a set of introductory discussions can be presented here.

Demand Side Management in NHR

Generally speaking, one should equates demand and supply. Same is true for the human resources. In that, researchers have tried to forecast the flow of human resource demand and, on the other side, policy makers used to raise critics upon the failure in supply side.

However, we do not have clear knowledge about the mechanism through which the human resource demand and supply move to an equilibrium. Planners have to consider the time, that is, future factor in terms of policy ideals and values. In this context, frequently found is that an over-supply ends up with an equilibrium by creating jobs and demands.

Therefore, planners in human resources should not consider the demand as an independent parameter. In other words, policy makers in the NHRD can actively adopt measures for demand management, or demand side management(DSM). However, very little is known about the demand side of human resources. Extensive knowledges about the demand and jobs would help us progress in this field.

Stock Limit and Allocation

The scarcity of resources limits all human activity including government actions. Educationists usually pay close attention to flow aspects of human resources: enrollments, graduates, and so on. However, the scarcity of resources come primarily from the stock. For the development of NHRD policy, one have to build the frame of the policy on this limit.

At present, only some demographic data are at hand. Much work of data collection should be done in this field. One finds many large-scale projects which are not supported by feasible human resources planning. Such a practice have resulted in the lack of human resource information and led to policy failures. To correct this, we suggest that all the possible big investment projects should include human resource impact analysis(HRIA) so that one can aggregate the human resources demand and verify it.

Competition and Selection

In every society, competition and conflict take place among people for the jobs and statuses. If one supposes the total amount of the competition is even in a given society, then problematic is the field and period of the competition. One might develop a typology of societies in this light(table-1). In some, schools might serve for the competition, and in others labour markets might do this.

〈Table 1〉 possible typology of systems by their characteristics of NHRD

	socio-political orientation	characteristics of education
type 1	wholistic egalitarian bureaucratic low mobility	education emphasize selection human capital building on work-site schools value excellence students compete education forms rigid bureaucracy
type 2	individualistic performance oriented competition friendly high mobility	selection takes place in labour markets education emphasize HCB schools value equity and democracy schools compete education integrated into labour market

However, policy makers should identify all the possible trade-off relations among competitions and matches in a society. In Korea, education revisionists come to know that some targeted school practices to reform are mainly the products of cumulated societal practices discouraging fair competition: personnel practices lacking performance principle, unfair and distorted market competition, and rent seeking behaviors prevailing among professionals. People could hardly expect fair competition once they leave schools. In this context, Korean schools have been asked to give student the overly exaggerated chance for fair competition. It means that Korean schools are destined to function far better as of screening device then as of device for human capital formation.

Competence and Qualifications

Money is, in its origin, a representer of the real economic goods and values. It represents certain amount of right to economic gains. On the other side, as money becomes the transporter of economic value abstracted from concrete properties, it performs important other functions: general medium of exchange, scale of assessing economic values, and storage of economic value.

Likewise, qualification also performs similar functions as money. At first, a recognised qualification help store learning. A well known fact to educators and trainers is that drop-outs before completion of a program lose not only the unfinished course left but the whole including what they learned until then. Getting a diploma one stores what one has learned. In this case, learning acquired is the value that the qualification represents.

A qualification also acts as parameter mediating exchange between one's competence and one's new opportunity be it a new job or a further learning opportunity. It is basically same as money being a tool of exchange mediates between present economic value and future opportunity to purchase. Both money and qualification are the mediator of the exchange between present and future.

Qualifications are also expected to be the tool of accounting human assets. Recently, international efforts have intensified to incorporate the human capital concept into the practice of business accounting. An obstacle to the efforts comes from the ambiguous legal entity of learning achievements. Learning is not transparent enough at this stage.

Development of sound and exhaustive as possible qualifications will make learning transparent so that the ideal of human capital concept will realize in the accounting practice.

Qualifications are in the real world of skills market not just proxies of real human competence and skills. Once proxies are put on circulation, the proxies become a powerful and ruling tool of evaluating a person. Instead of evaluating one's whole person, people customarily refer to one's qualifications. The proxy in the beginning now becomes the ruling value. Qualification follows the common process of transition from proxy to ruling value as does money.

We have had an old and obsolete shemes of national technical qualification which although contributed much to the economic progress in the past. The old schemes become out-moded and far beyond the new developments in the jobs and economy.

Policy makers and experts in this field came to know that qualification is a major parameter encompassing education and training system and the skills market. They also have noted an important aspect neglected for long, that is, qualifications are of social and all the more institutionalized construct.

The NHRD policy cannot escape from addressing the national policy of qualification. There are hot controversies between government ministries. However, it must be noted, least amount of refined knowledge is necessary for the new policy development.

New Types of Legal Arrangement: Human Resource Contract and Assets

In the world of economy. the economic activities and the acquisition of economic assets are regulated by the private law, that is, respectively the law of contract and the law of properties. The economic activities of production exchange and distribution take place in contractual relations governed by contract law. On the other hand, property laws decide the kind and attribution of the properties produced by the economic activities. In this way, the regulatory system of the private law provides the mechanism of incentives to economic activities and the attribution of economic values.

How about in the world of learning and skill formation? Every country has a set of rules and regulations in this area. Generally speaking, learning takes place in various legal context and then legitimate actors assess and recognize it to the effect that the learners carry the result as their recognized qualification. In that way or other, learning is legalized differently by countries. The effects of the assessment and recognition also strikingly differ by countries and by fields.

Learning and the use of the learning results is not so much regulated by explicit legal codes but rather largely regulated by cumulated customs and institutionalized wisdom.

Recently, new practices in legal arrangement concerning the learning began. The <HRD contract> is a typical one. Legal frameworks under which learning activities and the resulting acquisition of qualification are, compared with other field of laws, not fully studied and clarified. Such an under-development prevent the NHRD policy from progressing.

Ⅳ. Actors and Regulatory-Participatory Frame in NHRD

NHRD should be based on the extensive participation from individuals and social actors. Identifying the possible actors and preparing a frame for their participation was one of the most important developmental tasks.

An important source of the obstacles to participation in the NHRD come from the vertically organized character of the whole society. Prevailing vertical orders so much integrate individuals and units as to make them very unfriendly to horizontal contracting, networking, and necessary procedural discussions.

State and Local Government

The NHRD frame has to produce a well articulated relation between the state and municipalities. Local government and municipalities are by far the better players then the state for the NHRD. In Korea, however, the local autonomy itself has only a short experience. In reality, the local governance consist of clusters of local and national agencies while truly local initiatives are still standing on an early-child stage of the development.

University and Research Institutions

An earlier decision making in the past government had established a dual separation between higher education institutions and research organizations. As a result, it became a ruling reality that innovations do not relate to knowledge diffusion and graduate students usually stay out of important researches.

The only answer to the above problem would come from horizontal contracting and networking between university and research institutions. However, according to the constitutional lawyers scholars, while the constitutional provisions suppose the autonomous status of universities, the provisions did not fulfill yet. This is the deep reason why the intra-university orders do not freely allow the networking across the institutional border. It is time to renovate the state-university relation in Korea.

Enterprises and Labour Market

The employment insurance system in Korea, at the beginning, clearly aimed at building an effective skills development scheme. At present, however, both business and labour express discontent to the scheme.

At the same time, the strong role of the internal labour market and on-the-job learning is becoming fairy tales. Enterprises depend more and more upon outer-markets for their workers resource development. Since the policy to increase labour market flexibility was set up, enterprises began losing motivation to invest in training workers. Policy makers have to find an alternative to recover or compensate it.

Unionism and Industrial Relations

Among experts and policy makers, it is envisaged that a new practice of collective bargaining and agreement would develop around HRD agendas. However, in Korea, the tide of industrial unionism has just begun and the adversarial relation between employers and unions is still the ruling practice. Despite that the tri-party social consultation system is on operation, the system do not work well. We have a long way to go in this field.

NGOs and Intermediaries

Korean society has an old sector of associations and organizations between the public sector and the civil society which in the past frequently served for political mobilization. As democratic government develops substantially these associations and organizations(hereinafter "intermediaries"),they strengthen the role of the device for collective interests.

With a further development of civil movements in Korea, many NGO's prosper for civil participation and actions. Very recently, social dialogues begin about the role of the intermediaries focusing on "the life-centered activities". One can find an impressive source of social change agents for the transition to the life-long-learning society.

Woman and Feminism

Currently upsurging feminist movements are drawing much attention from the planners in NHRD. The movements achieved an important progress in 2001, by establishing the Ministry of Woman and Feminism.

Many reports, domestic or international, found a source of large capacity for further economic growth. Objectives were put in two directions. At first, increasing the woman's participation rate to the extent as high as possible. A particular emphasis is given to the highly educated young mothers. Reform of the early child education and care system is on hot debates in this context. The second emphasis is put on the introduction of the affirmative policy measures for woman so that the professional and executive jobs should be more opened to woman.

V. Policy Process

For the development of NHRD policy, Korean Government introduced, 2000 to 2001, a series of important adjustments in the ministerial relations.

From March 2000, the Minister of Education began presiding the Ministerial Commission for Human Resource Development(MCHRD), which had been proposed by the President. The President, in his new year address 2000, already had proposed the promotion of the Minister of Education to Vice Prime Minister(VPM). Legislation for such an adjustment concluded January 2001.

In February 2001, the Ministry of Education and HRD established one new office of the Assistant Minister and the Bureau of NHRD. They would closely assist the VPM's leadership in ministerial discussions. The two offices were expected not only to play the role of mediation between ministers but rather the role of initiating NHRD agendas in the MCHRD in the following ways:

- targeted early intervention to address the NHRD policy problems.
- close assistance to ministers in their policy development.
- inter-ministerial discussions preceding intra-ministry decision making

From the past 9 months of short experience, one can summarize the directions to go in terms of the process of policy making in this field.

From Bureaucracy to Joint Government

The NHRD policies are fundamentally of across-the-ministry nature. All the government bodies have their own contribution to NHRD. The principle of clear division of work and separated jurisdictions has long been applied to public bureaucracy. However, it seems that the era of modern and industrial bureaucracy is passing away. We are experiencing the era of joint government.

Inter-ministerial or Inter-agency Negotiation

Many ways of inter-ministerial relation are developing now. Ministries and agencies utilize coalitions, competitions, and networks for their aims and purposes. Negotiation become the most important organizational behavior among public officials at various levels.

Negotiation take place not only within the government but also between the public authorities and non-governmental bodies. It means the public administration begin using more and more contracts for achieving policy purposes.

Policy Initiatives and Agenda Management

Complexity is very the word that can summarize the nature of the problems and issues in NHRD. Every issues have multiple dimensions and all the problems are complicated. It means that the opinions and public debate tend to be superficial, and that sound knowledge and researches are indispensible in this field.

The VPM's leadership in the ministerial discussions is a key factor in the policy development. The above-mentioned early intervention decide the extent and effectiveness of the VPM's initiative. Planning the process of discussions and negotiations is an another difficult job through which an across-the-minister agenda is to be handled.

Total Performance Improvement in NHRD Policy

For the officials in charge of the NHRD policy development, the work is at the same time the job of governmental process innovation. They cannot find models from the precedents made in the past era of the economic development planning.

An final picture of possible development in this policy area might be a kind of the total performance improvement(TPI) system within the government targeted to the improvement of the whole NHRD policy. This is why we call it "the job of governmental process innovation". The job is inevitably of systemic nature and needs much of analytic works. The job cannot be easily achieved without cooperation with experienced researchers.

Ⅵ. Conclusion: Emerging Role of Post-modern Government

Korean economy had commanded an extraordinarily rapid progress in a short period of past 35 years. A Big portion of working Koreans have experienced, in their working life, the wide spectrum of transition from a primitive level of rural economy up to the current economic insertion into the global economy. Thirty five years ago in Korea, agriculture accounts for most of our products. From that starting place, Korean economy soon took off into the industrialization stage replacing agricultural population by industrial workers in manufacturing sites. Such a rapid transition could continue for long without serious unemployment. The least level of literacy and numerical skills already then universalized among population and the National Technical Qualification System introduced in the middle of seventies have supported the economic expansion.

However, lots of changes in recent economic crisis are signaling that Korean economy cannot further continue the line of economic expansion without fundamental shift into a more refined service economy. Such a task require a large scale of renewal in skills and competences among Korean population. Problems lie in that the past tools of national skill formation would not work effectively any more: expanded but old fashioned education and training institutions seldom accomodate the new skill demands, and the rigid statutory orders lost its usefuness.

The Korean labor market at present shows many characteristics of employment adjustment. To run the risk of oversimplification, services instead of production characterize the new economy in general. The emerging new economy has changed the scope and nature of the qualification profile needed. As structural adjustment and globalization in economy rapidly proceed now, building a new profile of national qualification becomes an unavoidable national target. The main aim of this paper was to provide and exchange ideas about analytic footstone among those interested in NHRD policy development in a country in transition like Korea.

자유토론

◆ Vocational Education and Training in the UK

/ Dr. Brendan Barker

Q France는 정부에서 직업교육, 일반교육에 있어서 규제 혹은 지원 등의 정부의 개입을 줄이고 있는 추세인데 (Dr. Barker의 발표에 의하면) 영국의 경우에는 국가차원의 HRD 계획을 하고 있는 듯하다. 어떠한가?

A 다른 유럽의 국가와는 달리 영국은 최근의 정치역사와 관련하여 정부규제가 전무하였던 것의 반대급부로 정부의 규제와 지원이 활발한 것이 사실임.

Q 영국 교육체제의 3가지 track에 대하여.

A 과거에는 11세, 혹은 16세에 자신의 진로를 결정하고 academy의 track으로 갈 것인지 직업교육의 track으로 갈 것인지를 결정하여, 이 line 간에 이동할 수 없었는데, 자격증과 관련하여 새로운 제도가 생기면서 이동이 가능하게 되었음. 즉, 자격증을 가지고 diploma를 수여하는 기관에 입학할 수 있는 기회를 제공하게 되었음.

Q 영국 직업교육담당 조직인 QCA (Qualifications and curriculum Authority), LSC (The Learning and Skills Council), SC (School Curriculum and Assessment Authority)의 차이점은 무엇인가?

A QCA는 1997년에 만들어졌고, LSC는 6개월전, SC는 올해에 만들어진 기관들임. LSC가 총괄하여 각각의 기관들을 관장하는 데, QCA는 실제내용을 담당하고, SC는 부분적 요구를 담당하되, QCA의 인가를 받아 표준을 정하는 일을 하고 있음. 그러나, LSC와 SC가 최근에 만들어진 조직이므로 자세한 운영내용이 정해져야 할 것임.

Q 직업자격증을 대학으로 진학할 때 인정해 준다고 하였는데, 대학에서 자격증 소지자의 대학입학과 대우를 어떻게 하고 있는가?

A 직업자격자에게 편견을 가지고 있는 것은 사실이며, 입시와 관련하여 더욱 그러함. 실제에 있어서 인문계 출신을 우대하고 있지만, 직업자격에 있어 사회적 인정을 받을 때까지 계속 노력을 해야할 것임. 사실, 호주나 한국과 달리 영국의 대학은 한 대학을 제외하고는 모두 공립임. 그러므로 영국 정부는 지원금을 주기 때문에 영향력을 행사할 수 있음. 소수인종, 성인, 여성 등 취약계층의 입학을 적극적으로 유치하는 학교에는 정부의 인센티브를 줄 수 있을 것임.

Q 대학교에서 직업자격증을 가지고 있는 학생을 대하는 교수의 태도는 어떠한가. 그리고 영국에서는 프랑스와 달리 정부역할을 키우고 있지만, 베트남에서는 프랑스에서처럼 정부의 역할을 축소하여야 할 상황임. 개도국인 베트남이 직업교육에 있어서 정부의 개입을 줄일 수 있는 방안은 무엇이라고 생각하는가?

A 대학에서의 차별적인 태도가 점차로 없어지고 있는 추세임. 기술대학에서는 더욱 더 빠르게 편견이 없어지고 있음. 그리고, 지방자치가 잘 발달되어지고, 정부기구라 할 지라도 각 지방조직을 활용하여 현지, 지방의 요구에 부응하는 정책을 펴나간다면, 중앙정부의 개입을 줄일 수 있을 것임.

Q 전통적 도제교육 (apprenticeship)과 Dr. Barker가 말하는 도제교육과는 어떤 차이가 있는지?

A 자동차, 항공, 우주산업 등에서 전통적인 의미에 있어서의 도제교육이 이루어지고 있고, 이 현장의 경험이 대학을 진학하는 데 기여를 하고 있음. 그러나, 많은 분야에 있어서 도제교육은 (예; 미용기술) 쌓은 경력에 관하여 객관화, 일반화를 할 수 없다는 단점이 있음. 그러므로 각 사업장에 따라 교육내용이 달라지는 도제교육과는 달리, 현대적인 의미에서의 도제교

육은 쌓은 경력을 객관화시킬 수 있도록 교과내용을 조정하는 것임. 즉, 국가공인 훈련인 경우 훈련의 기간, 기술, 자격기준 등이 정해져 있고, 추가교육도 가능하도록 내용을 조직하는 것임.

◆ National Human Resources Planning: Issues and Problems

/ Dr. Ki-oh Jeong

Q 상급학교에 관한 과도한 진학열로 인해 공교육이 붕괴되고 있는 현실에서 교육의 구조개혁 뿐 아니라 사회의 개혁이 필요하다고 하였는데, 교육의 체제에 있어 학부모의 개입이 (도움이) 필요 할 것임. 어떤 방법으로 학부모를 교육구조개혁 개입으로 유도할 것인가?

A 학교차원의 경쟁을 줄이도록 하여야 할 것임. 개혁의 추진은 장기적인 차원의 계획이 필요함. 우리가 할 것은 방향을 명확히 하는 것이 중요하고, 모든 주체, 단체, 학생들이 그 방향에 대해 알 수 있도록 하고, 다 함께 같은 목표를 향해 갈 수 있도록 나아가야 할 것임.

Q 국가인적자원 개발에는 많은 현안이 있음. 기술교육과 관련하여 학생들이 미래에 필요하게 될 기술을 수요자의 측면에서 예측하여 교육을 받아야 할 것임. 산업사회의 기술이 무엇인지를 어떻게 예측할 것인가?

A 예측이라는 것은 매우 어렵고, 계획자의 입장에서는 더욱 어려운 것임. 우리의 예측은 사실분석에 그 근거를 두고 있지만, 더욱 중요한 것은 수요를 창출하는 것이라고 생각함. 예를 들어, service 분야에 있어 새로운 수요를 창출하기 위한 가능성을 개발하는 것이 중요할 것임.

Q 인적자원개발에 있어서 중요한 주제는 '세계화' 일 것임. 이 세계화와 관련하여 주요정책들은 무엇이라고 생각하는가?

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A 첫 번째는 근본적인 기틀을 잡는 것이라고 생각한다. 우리나라에서는 이를 위해 5개년 계획을 다음달에 발표할 예정임. 둘째는 이행을 계획하는 단계인데, 우리의 경우에 있어서는 4개의 주요분야가 있고 16개의 하위분야로 나누어 진행할 예정임.

Q 한국은 지방자치제가 시작된지 10년이 되었다고 들었다. 국가전략과 지방차원에서의 연관관계는 어떠한가? 교육에서 실시되고 있을 지방분권화, 자체자원충당, 예산독립 등이 직업교육에서는 어떻게 반영되고 있는가?

A 우리나라의 상황에서 매우 어려운 일 중의 하나임. 각 지방에는 지방교육청이 있는데, 인문교육에 관한 교육에 주력하고 있는 실정이고, HRD나 직업교육에는 관심이 없는 형편임. 지금으로서는 국가방향에 발 맞추어 분명한 Mission을 만든 후 지방교육청에 HRD에 관한 의무를 부여하는 것이 중요할 것임.

Q 사회신뢰성 구축에 관한 말씀을 하셨는데, 사회신뢰성 구축은 학교에 100% 책임을 지울 수 없을 것임. 이는 여러 기관의 연결로 가능할 것인데, 좀 더 큰 그림의 전략이 있는가?

A OECD의 정의에 의하면 사회적 자산이란 여러 가지 인간활동의 기본이 되는 사회적 거래, 행동 등을 뜻하는데, 국가마다 개발 상황이 다르므로 사회의 신뢰도 구축, 사회적 자산에 대한 전략을 만드는데 있어 차이가 있을 것임. 한국은 선진국에서 볼 때, 가정의 기능, 부모의 역할, 사회적 자산이 강하다고 보고 있음. 하지만 주요 사회제도, 조직행동, 정부의 형식주의, 시장경제구조의 취약, 윤리관, 공평거래 등에 있어 취약한데, 사회의 신뢰가 매우 필요함. 사회의 신뢰감 구축에 학교가 전적으로 책임질 수 없음에 질문자의 의견에 동의함. 사회전반 조직의 공동의 노력이 필요할 것임.

Q 거시적인 HRD의 계획을 어떻게 미시적으로 지방으로 연결할 것인가?

A 실제 실무자들의 실행을 위해서는 실무자들에게 동기를 부여 혹은 벌칙을 주어야 할 것임. 그리고 실무자들을 불신하는 분위기 역시 쇄신되어야 할 것임. 법규는 대부분 벌칙, 동기부여, 보상, 회계관행 등이 법적으로 정해진 것인데, 교육-인적자원개발은 뒤져있음. 인적자원개발에 있어 자격증제도는 동기부여, 보상제도에 해당된다고 할 수 있음.

Ⅶ. 주요 정책 이슈 및 향후 논의 과제

1. 경제 · 사회 환경 변화와 직업기술교육훈련
2. 학교에서 직업세계로의 전이
3. 성인을 위한 재교육 · 훈련
4. 학교와 노동시장간의 연계를 위한 자격제도
5. 인적자원개발을 위한 국가 전략

1. 경제 · 사회환경 변화와 직업기술교육훈련

가. 지식기반 경제사회의 진전

□ 지식기반 경제사회의 특징으로 경제원리가 변화하고 있다는 점을 지적할 수 있음.

- ㅇ 지식기반 경제사회는 과거 산업사회와는 달리 지식이 개인, 조직, 그리고 국가 경쟁력의 기본이 되는 사회임. 이는 물적 개념의 자본이나 노동 대신 개인의 창조성 · 창의력에 기초한 지식이 부가가치 생산의 주요 요소가 됨을 의미함.
- ㅇ 주요한 생산요소가 정보와 지식이 됨으로써 무한대의 자원 창출(공급)이 가능해짐. 이는 지식과 정보의 축적 및 활용도가 높을수록, 더 많은 지식과 정보의 획득은 물론 새로운 지식과 정보의 창출이 용이하기 때문임.

□ 정보의 신속한 공유가 보다 용이해짐에 따라 정보의 비대칭성에 기인한 경제의 비효율성이 축소되고, 공간개념의 소멸로 경제의 글로벌화가 촉진되고 있음.

- ㅇ 지식과 정보가 주요한 자원이 되고 정보통신 기술의 발달로 지식과 정보의 교환이 전 세계적으로 급속히 확산되면서, 물리적인 입지의 중요성이 크게 약화되고 경제활동의 글로벌화가 가속화되고 있음.

□ 지식기반사회에서는 실시간(real time) 경제의 구현이 가능해짐.

- ㅇ 산업시대에서는 경제 활동 변화가 시차를 두고, 혹은 공간적으로 거리를 두고 전파되었으나, 정보 교환이 실시간으로 이루어지는 디지털 경제 시대에서는 시간과 공간의 격차없이 경제 활동이 세계 각국에서 동시에 일어남.

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- 인터넷의 발달에 의해 각 경제주체들의 조직과 제도가 상호 연결된 네트워크 구조를 형성하여 네트워크상의 가상 경제 활동 공간을 형성하게 됨.
- 급속한 기술 발전은 제품의 수명 단축, 기술 융합을 통한 신제품의 등장 등을 촉진시킴으로써 경제의 예측 불가능성이 높아지고 있음.

□ 정보격차로 인한 새로운 불평등 구조의 심화가 우려됨.

- 지식기반사회에서 모든 개인, 조직 그리고 국가가 지식을 창출 · 습득 · 활용 · 확산할 수 있는 동등한 능력과 기회를 갖고 있는 것은 아님. 새로운 지식의 팽창 속도의 차이, 지식획득 기회의 제한 등은 세계 경제에 있어 선진국과 후진국간의 격차와 한 국가 내의 사회계층의 양극화 현상(digital divide)을 심화시킬 수 있음.
- 이는 지식 창출의 수확체증 특성과 지식 활용에 있어서의 외부효과의 영향 등을 고려할 때, 지식기반사회에서 선진국과 후진국간의 격차가 더욱 커지고 새로운 지식을 습득 · 활용할 역량을 갖추지 못한 취약계층이 한계집단으로 전락할 위험성이 커지고 있음을 의미함.

나. 세계화 · 지구촌 시대의 진전

□ 21세기초는 정보 · 통신기술 및 교통 · 운송기술의 발달로 세계화 현상이 더욱 급속히 진전되어 지구촌 시대가 도래할 것으로 예상됨.

- 세계화 진전에 따라 국가간의 관계에 있어서도 한 국가 또는 지역의 문제가 바로 지역적 · 세계적 문제가 될 수 있음.
- 무역 · 투자의 자유화 추구로 과거 국가 단위 시장에서 지역단위 또는 세계단위의 시장으로 시장영역이 확장됨으로써 세계 통합과 지역분업이 심화될 것임. 이와 함께 세계시장에서 국가간 무한경쟁이 현실화되고 있음.

□ 국가간 노동이동의 증가 예상

○ 국가간 장벽의 약화, 국제교류·협력 관련 제도의 성숙, 지역분업의 진전 등으로 실물 상품 뿐만 아니라 노동, 자본, 기술 등 생산 요소의 국제 이동이 활발히 이루어질 것으로 예상됨.

다. 기술변화로 인한 산업 및 직종구조의 변화

□ 지식기반사회는 산업사회와는 달리 지식 및 기술의 변화 속도가 매우 빨라 대학 졸업장이나 자격증의 유효기간이 상대적으로 짧아짐과 아울러 산업 및 직종구조도 빠르게 변화하는 특징을 가지고 있음.

○ 대표적인 예로 정보통신기술의 발전은 그 기술의 생산자인 정보통신산업의 급속한 성장을 유발하고 있음. 컴퓨터나 휴대전화와 같은 정보통신기기를 생산하는 부문이나 통신사업자 등 정보통신 서비스를 제공하는 부문, 소프트웨어 산업을 포함한 정보통신산업이 빠르게 성장하면서 경제성장의 핵심 역할을 담당하고 있음.

□ 기술혁신으로 인하여 경제의 서비스화 경향이 강하게 나타나고 있음.

○ 디지털 경제의 도래에 따른 지식, 정보의 중요성 확대로 과거부터 지속되어오던 경제의 서비스화 경향이 더욱 강화되고 있음. 이는 정보통신기술의 발전과 확산이 금융, 항공, 무역, 운송업과 같은 기존 서비스업의 성장을 가능하게 하는 서비스 인프라의 구축을 촉진했고, 정보처리업과 같은 신규 서비스업의 탄생과 성장을 가져왔기 때문임.

○ 또한 기존 산업에서의 정보통신기술의 활용도가 증가하고 있음. 정보통신기술 및 관련 투자가 정보통신이외의 산업에서 생산요소로 기능하기 시작하였고, 소위 굴뚝산업과 첨단산업의 융합, 혹은 정보통신기술을 활용한 굴뚝산업의 고부가가치화의 중요성이 대두되고 있음.

□ 보다 전문적인 직업능력에 대한 요구가 증가하고 있음.

- ㅇ 기술의 급속한 발전은 근로자로 하여금 기초 능력은 물론 전문적 능력(정보기술을 포함한 전문능력), 조직적 능력(의사소통능력, 분석 및 문제해결능력, 안간관계, 자기경영능력 등), 기업특수적 능력을 고루 갖추도록 요구하고 있음.
- ㅇ 정보통신기술 관련 인력을 중심으로 고기술, 전문인력에 대한 수요가 증가할 것임.

라. 노동시장 및 고용행태의 변화

□ 필요인력의 외부 노동시장에의 의존도가 높아질 것으로 예상됨.

- ㅇ 지식기반사회의 지식과 기술의 빠른 변화는 산업 및 직종구조의 급속한 변화를 초래하며 이에 따라 노동력의 이동이 증가하고 고용형태가 다양화되고 있음. 노동시장의 유연성 제고에 따른 고용의 불안정성은 기업의 직업훈련투자 동기를 약화시켜 외부노동시장에 대한 의존을 심화시키고, 개인차원에서의 지속적인 교육훈련투자를 어렵게 만들고 있음. 개인, 조직, 국가 관점에서 직업교육훈련에 대한 과소투자가 우려되는 상황임.
- ㅇ 필요 인력의 외부시장에의 의존 심화는 근로자의 경험 기회 상실로 인하여 경력근로자 공급의 시장실패를 초래할 수 있음.

□ 급속한 기술혁신에 따른 숙련불일치(skill mismatch)의 증대

- ㅇ 정보통신 관련 산업의 발전으로 이 부문에 대한 고용은 크게 성장할 것이나 기존 굴뚝산업에서는 정보통신기술의 대체효과로 고용감소가 예상됨.
- ㅇ 굴뚝산업에서 배출되는 인력이 정보통신 관련 산업이나 직종으로 흡수되도록 하기 위해서는 이들 인력의 숙련불일치 문제를 해결하여야 함.

□ 비전통적인 고용형태의 증가

- 노동시장의 유연성 추구 경향이 심화되면서 임시 및 일용직 등 비정규 근로자의 비중이 증가하고 있음. 이들은 90년대 초반 이후 증가하기 시작하여 2000년에는 임금 근로자의 52.4%(6백8십여만명)에 이르고 있음.
- 이들은 임금이나 기타 근로조건면에서 열악한 위치에 있을 뿐 아니라, 직업능력개발 기회가 현실적으로 거의 주어지지 않아 '불안정취업-실업-비경제활동'의 악순환에서 헤어나지 못하고 있음.

마. 인구구조의 변화

□ 인구의 고령화로 생산가능인구의 부양 부담 확대

- 2000년에 이미 고령화 사회로 진입하였으며, 2022년에는 노령인구의 비율이 14%를 넘어 고령사회에 들어설 전망임. 아직 선진국에 비하여 노령화 정도는 낮은 편이지만, 노령화가 선진국에 비하여 매우 빠른 속도로 진전되고 있음.
- 이로 인해 생산가능인구의 노인부양 부담이 크게 늘어날 전망임.

□ 노령인구 증가에 따른 경제적 부담을 완화하기 위하여 노령 노동력 및 여성인력의 활용도 제고를 위한 정책적 노력이 요구됨.

바. 정책적 시사

□ 지식기반 경제사회에서는 지식이 부의 창출과 경쟁력 제고의 근본이 되는 바, 지식의 창출, 보급 및 활용 능력을 기르기 위한 지속적인 교육과 훈련을 받을 필요가 있음. 새로운 지식의 급속한 팽창 및 지식획득 기회의 제한은 사회계층의 양극화 현상을 초래하므로 사회통합차원에서 교육 · 훈련 정책을 수립 · 운영할 필요가 있음.

□ 세계화, 지구촌화의 진전으로 경제·정치체제가 국가단위에서 지역단위, 세계단위로 확대됨에 따라 직업교육훈련 정책의 수립·집행에 있어 세계화 요인을 모든 부문에 반영할 필요가 있음. 특히, 노동, 자본, 기술 등 생산요소의 국제 이동에 능동적으로 대응할 수 있는 직업교육훈련 체제의 확립이 요구됨.

□ 기술혁신으로 인한 산업 및 직종구조의 변화, 노동시장의 고용행태 변화, 인구의 노령화 등에 대응하기 위하여 정규 직업교육기관의 대응력을 높이고 성인 근로자 및 실업자, 노령자를 대상으로 직업교육훈련 기회 및 관련 정보를 지속적으로 제공할 필요가 있음. 특히, 기술발전으로 인한 산업구고 고도화 및 전문·기술직의 증가에 대비하여 직업교육훈련의 내용이 보다 전문화·조직화·체계화되고 그 질적 수준이 제고될 필요성이 큼.

□ 세계화의 빠른 진전, 급속한 기술혁신 등은 세계 각국의 경제를 위협하는 동시에 경제발전의 좋은 기회를 제공하기도 함. 개방경제로의 전환기에 생기는 사회적 비용을 최소화하고 경제발전의 기회를 최대한 활용하기 위해서는 다른 나라보다 우수한 양질의 고급기술을 보유하고 있어야 함. 이를 위해 환경변화에 신속하게 대응할 수 있는 유연하고 개방적인 직업교육훈련체제를 갖추어야 하며, 이에 대한 투자가 충실히 이루어질 필요가 있음.

2. 학교에서 직업세계로의 전이

가. 주요 정책 이슈

1) 학교에서 직업세계로의 전이 경로

□ 학교에서 직업세계로의 전이 경로는 크게 두 가지로 나누어 생각할 수 있음. 하나는 개인 중심으로 구축된 경로(individually constructed)이고, 다른

하나는 기관·제도 중심으로 구축된 경로(institutionally constructed)임. 전자는 학교 재학 중 또는 졸업 후 노동시장에 취업하게 되는 것이 주로 개인의 준비와 구직활동을 통하여 이루어지는 경우를 말하며, 후자는 이 보다는 교육기관과 기업체간 또는 공공이나 민간기관을 통하여 제도적으로 이루어지는 경우를 일컬음.

□ 대개의 경우, 개인은 전자를 중심으로 노동시장으로의 진입을 시도하게 됨. 이러한 진입경로에는 다음과 같은 여러 유형이 있을 수 있음: 1) 학교에서 직업기술교육훈련 기관으로 이동 후 노동시장 진입; 2) 학교에서 도제나 훈련생 과정을 거친 후 정식 취업; 3) 학교에서 고등교육기관으로 진학: 4) 학교 재학 중 시간제 취업 경험을 통하여 노동시장에 진입; 5) 전일제 학생으로서 학교 졸업 후(직업세계에 대한 사전 경험없이) 노동시장에 진입; 6) 학교 졸업 후 미취업 또는 비경제활동인구로 잔재.

2) 학교에서 직업세계로의 특정 진입 시기

□ 종래에는 학생들이 학교교육단계에서 노동시장에서의 취업단계로 이전할 때, 취업을 준비하는 특정한 일정기간을 측정·분석하였음. 즉, 졸업 후 최초 직업을 갖기까지 소요된 기간을 측정하여 학교에서 직업세계로의 전이 분석, 학교교육의 효과성, 노동시장의 노동 흡수력 논의 등에 활용하였음.

□ 그러나 최근 들어 이러한 특정 진입 시기의 측정 및 분석의 중요성이 상대적으로 줄어 들고 있음. 호주의 경우, 많은 학생들의 경우 학교공부와 직업생활을 동시에 하고 있음. 특히 상당 수의 고등학교 학생들이 시간제로 일하고 있으며, 대학생의 경우 여러 가지 형태의 취업을 하고 있음.

3) 고등학교 이상의 학력 및 자격증 수요

□ 과학기술 및 통신기술 등의 급속한 발달로 산업 및 직업구조가 빠르게 변화하고 그 수준 또한 하루가 다르게 높아지고 있음. 이에 따라 노동시장에서는 이전보다는 높은 수준의 능력을 갖춘 인력을 필요로 하게 됨. 지식기반산업의 비중이 높아짐에 따라 고등학교 이상의 학력이나 이에 준하는 각 분야 전문성을 나타내는 자격증에 대한 요구가 커지고 있음.

□ 학교에서 노동시장으로의 전이가 보다 원만히 이루어지기 위해서는 노동시장 진입 직전의 개인이 고등학교 이상의 학력이나 산업계에서 필요로 하는 자격증을 갖출 수 있도록 교육과정 및 제도가 개선되어야 할 것임.

4) 직업기술교육훈련 교육과정

□ 직업기술교육훈련 교육과정이 학교에서 노동시장으로의 전이에 긍정적인 기여를 하기 위해서는 그 내용이 노동시장의 인력 수요와 일치하여야 함. 그러나 현재의 직업교육훈련 교육과정을 살펴 보면, 그렇지 않은 경우가 종종 발견됨. 예를 들면, 1999년대 중반 이전까지의 호주의 직업교육 교육과정은 대학에 가려는 학생들에게 초점을 맞추어 설계·운영되었기에 그 효과성이 낮을 수밖에 없었음.

□ 직업기술교육훈련 교육과정은 기업체(고용주)의 직업기술 수요에 맞추어 제정·운영되어야 함. 이러한 관점에서 호주는 1990년대 중반에 학교 직업교육훈련 프로그램을 새로이 개정하였음. 이 프로그램은 대학에 가지 않는 학생들을 위한 학교에서 직업세계로의 전이 경로를 제공하고 특정 산업 및 직업에 초점을 맞춘 직업교육훈련 과정을 제공하고 있음.

5) 정부 관여

□ 시장경쟁원리에 의한 제도의 운영이 이론적으로는 가장 합리적인 결과를 보장하게 됨. 그러나 현실적으로 시장실패의 사례가 발생할 수 있기 때문에 이에 대한 보완 차원에서 정부는 학교에서 직업세계로의 전이과정에 직·간접적으로 관여하게 됨.

□ 이러한 정부의 관여는 학교에서 직업세계로의 전이가 개인 차원에서 이루어지든, 아니면 제도적 차원에서 지원되든 관계없이 사회적 효율성을 최고화하는 관점에서 논의·추진되어야 할 것임.

나. 주요 정책

1) 다양한 이동 경로 개발·활용

□ 학교에서 노동시장으로의 전이가 효과적으로 이루어지기 위해서는 우선 평생교육 관점에서 체계적이고 명확하게 개념 규정된 '학습경로'와 '자격제도'가 갖추어져야 함. 이러한 학습경로와 자격제도는 학교에서 학교로 이동하든 아니면 학교에서 노동시장으로 이동하든 어떤 경우에도 효과적인 연계가 가능하도록 설계되어야 하고, 모든 개인이 활용할 수 있어야 함. 학습경로와 취업간의 연계가 제도적으로 확립된 나라에서 학교에서 직업세계로의 전이가 보다 성공적으로 이루어지고 있는 것으로 나타나고 있음.

□ 최근 젊은 이들은 보다 유연한 형태의 학교에서 노동시장으로의 전이 방식을 활용하고 있음. 일반교육과 직업교육간 교육과정의 조합, 학교교육과 노동시장에서의 직업경험간의 조합 등에 있어 개인의 장래 계획에 따라 융통성있는 방식을 취하고 있는 것이 일반적인 경향임. 일반교육에 직업교

육 내용을 강화한다든가 또는 그 반대로 직업교육에 일반교육 내용을 강화하는 방안, 직업교육과 고등교육과의 연계를 새롭게 시도하는 방안 등이 실행되고 있음.

2) 종합정보 서비스 및 진로상담 서비스 제공

□ 상기에서 언급한 바와 같이 학교에서 노동시장으로의 전이 방식이 다양해짐에 따라 개인, 교육훈련기관 그리고 기업체 등은 보다 체계화되고 정확한 정보를 필요로 하게 됨. 개인의 관점에서 자신의 진로에 대한 결정을 내리는데 이러한 정보는 중요한 기여를 하게 됨. 이에 관련 종합정보체제를 구축하는 것이 필요함.

□ 중·장기 산업 및 직업 변화 전망이나 각 직업들이 필요로 하는 자격조건 등에 대한 정보, 교육훈련기관에서 전공과정별로 학습하는 교육과정 내용에 관한 정보 등이 체계적으로 정리·제공될 수 있는 정보 체제를 갖추는 것이 필요함. 학교에서의 진로 상담, 사회에서의 경력개발 상담 등은 이러한 정보를 근거로 이루어져야 할 것임.

3) 학교와 기업간의 협력관계 강화

□ 학교에서 직업세계로의 전이가 효과적으로 이루어지기 위해서는 학교에서 기업이 필요로 하는 직업기술교육을 실시할 필요가 있음. 현재는 학교와 기업간 연계가 형식적이거나 거의 없는 관계로 학교교육과 노동시장 인력수요간 일치성이 낮은 편임.

□ 학생들이 기업에 가서 현장실습을 할 수 있고, 또한 기업체 인사가 학교의 직업기술교육훈련 교육과정 및 프로그램 개발에 참여할 수 있는 체제를 갖춤으로서 학교 교육효과를 제고할 수 있을 것임. 도제제도의 활용,

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시간제 근로 학생제 운영, 학교기업 설립·운영 등이 이러한 협력관계의 대표적인 예라 할 수 있음.

4) 학교에서 직업세계로의 전이 지원체제 구축

□ 정부차원에서의 지원체제를 설계·구축·운영하는 것이 필요함. 예를 들어, 교육훈련기관과 산업체 협회간의 사회적 협력관계를 구축한다든가, 정부 지원방안을 법으로 규정하여 학교와 기업체간의 협력관계 운영을 적극 지원하는 방안 등을 생각할 수 있음. 중앙정부, 지방정부, 교육훈련기관, 노동조합, 학부모단체 등과의 네트워크 구축은 급속한 경제·사회 환경 변화에 대한 개인, 교육훈련기관 및 기업의 대응능력 제고에 기여할 것임.

□ 일반적으로 중앙정부에서는 정부 차원의 지원 원칙과 방식을 법령에 규정하고 그 운영은 지방정부 차원에서 지방의 특성에 맞게 유연하게 운용할 수 있도록 하는 것이 바람직함. 이러한 제도적 협력관계는 개인적 차원에서의 협력관계보다 훨씬 효율적이고 효과도 클 것임.

5) 새로운 교육과정 개발 및 교사 연수 체계화

□ 상기 언급한 정책방안 등을 통하여 학교에서 직업세계로의 전이가 원만히 이루어지기 위해서는 무엇보다도 직업기술교육훈련 교육과정의 주기적 개정과 급속한 경제·사회 환경변화에 대하여 교육과정 및 프로그램을 자체적으로 개정·개발하여 가르칠 수 있는 능력있는 교사의 확보가 우선 전제되어야 함.

□ 이를 위해서 단위학교에 교육과정 편성 및 운영의 자율권을 최대한 인정하고 교사 연수를 위한 행·재정적 지원책이 강화되어야 할 것임. 한정된

재원의 효율적 사용을 위하여 기업체와의 협력관계를 최대한 이용하고, 규모의 경제를 살릴 수 있는 방안을 강구하는 것이 필요함.

3. 성인을 위한 재교육 · 훈련

가. 주요 정책 이슈

1) 새로운 자격 및 직업기술의 습득

□ 과학기술의 빠른 발전과 이로 인한 직업 및 산업구조의 급속한 변화는 성인 근로자들이 더 이상 이전에 습득한 직업기술이나 자격으로 취업상태를 유지하기 힘들게 만들고 있음. 많은 직업이 새로운 기술의 발달로 사라지고 또 새롭게 생겨나고 있어 성인들이 이러한 환경변화에 대응하기 위하여 지속적으로 새로운 기술을 익히고 자격을 습득해야 할 필요성이 높아지고 있음.

□ 지금 현재 시점에서 교육훈련을 통하여 새로운 지식이나 기술, 자격을 습득하였더라도 몇 년 내에 다시 직업환경의 변화로 새로운 기술 습득을 위한 재교육을 받을 필요성은 계속적으로 생겨나게 될 것임. 이러한 환경변화에 성인들이 적절하게 대응할 수 있도록 정책적 지원방안을 강구할 필요가 있음.

2) 여성인력에 대한 재교육 · 훈련

□ 향후 우리 나라의 산업구조가 지식기반산업 중심으로 재편됨에 따라 이 분야에 많은 일자리가 창출될 것으로 예상됨. 이 중 상당 부분이 교사, 컴퓨터 및 소프트웨어 전문가, 회계사, 간호사, 연구원 등의 전문직으로

이들에 대한 인력수요가 그 어느 때보다도 증가할 것임. 그런데 이들 일자리를 남성으로만 채우는 데에는 한계가 있음.

□ 우리 나라 대졸 이상 학력소지자 중 여자의 경제활동참가율은 OECD 국가 중 최하위에 머물고 있음. 이들 여성인력의 활용이 경제발전에 중요한 핵심 주제로 부각되고 있음. 현직에 있는 여성 근로자 뿐만 아니라 현재 미취업상태에 있는 고급 여성인력의 활용을 위한 재교육·훈련 프로그램의 개발 및 이의 지원 방안 강구가 필요한 시점임.

3) 중장년층 및 노년층에 대한 재교육·훈련

□ 새로운 지식 및 기술, 자격의 습득은 나이가 많을수록 어려워짐. 실제 성인들의 재교육·훈련 참여 사례를 살펴 보면, 나이가 많을수록 재교육·훈련 참여 횟수가 적은 것으로 나타남. 많은 기업들의 훈련 프로그램이 젊은 층 중심으로 이루어지고 있음. 지식기반 경제사회에서 중고령층 성인에 대한 재교육·훈련이 체계적으로 이루어지고 이에 대한 정부 차원의 지원책이 마련되어야 할 필요가 있음.

□ 성인 근로자의 연령에 따라 적합한 재교육·훈련 방식을 채택하는 것이 필요함. 재교육·훈련 참여의 동기가 연령대별로 다르게 나타날 수 있으므로 이에 대한 사전조사를 통하여 각자의 필요에 맞는 프로그램을 운영하는 것이 중요함.

4) 모든 성인에게 동등한 재교육·훈련 기회 제공

□ 직업 및 산업구조의 급속한 변화에 대응하기 위한 방안의 하나로 성인들에 대한 재교육·훈련의 중요성이 강조되고 그 기회의 확대가 제안되고 있음. 많은 성인들이 다양한 형태의 성인 교육·훈련 프로그램을 통하여 자신에게 필요한 지식과 기술 그리고 자격을 습득하고 있음.

□ 그러나 이러한 재교육·훈련 기회가 모든 성인에게 필요한 때 동등하게 제공되는 것은 아님. 따라서 정부는 성인 재교육·훈련기회의 동등한 제공을 위한 정책적 노력을 경주할 필요가 있음.

나. 주요 정책

1) 조직화된 체계적인 재교육·훈련체제의 구축·운영

□ 성인 대상 재교육·훈련 프로그램이 소기의 성과를 달성하기 위해서는 재교육·훈련 프로그램이 노동시장에서 필요로 하는 지식 및 기술의 종류와 수준에 맞추어 체계적으로 조직화되고 훈련 결과가 공식적으로 인정되는 체제를 갖추는 것이 중요함.

□ 기업에서의 재교육·훈련 프로그램들도 자체적으로 교육훈련 성과를 수준별로 나누어 이를 단계적으로 인정해 나가는 체제를 갖추는 방향으로 개선되어야 할 것임.

2) 중장년층 대상 재교육·훈련 프로그램 개발·운영

□ 중·장년층에 대한 재교육·훈련 기회 확대를 위하여 이들을 대상으로 하는 정부의 공공 직업훈련 프로그램을 강화함. 현재 중장년층의 직업교육훈련은 주로 on-the-job training 형태로 이루어지고 있어 한계가 있음. 정부는 이러한 한계를 극복하고 기업으로 하여금 중장년층 재교육·훈련에 체계적인 투자를 할 수 있도록 유도할 필요가 있음.

□ 기업에서는 작업팀 구성 시 여러 연령층을 골고루 섞어 구성함으로써 연령층대별로 상호 장점을 습득할 수 있는 기회를 제공하는 것이 중요함. 중장년층은 문제해결 방법, 회사내에서의 업무처리 방식 등을 젊은 층에

게 전수하고, 젊은 층은 새로운 신기술을 중장년층에게 일을 통하여 가르치는 효과를 기대할 수 있음.

3) 성인 재교육 · 훈련 지원을 위한 법적 · 재정적 지원책 강구

□ 조직화된 체계적인 재교육 · 훈련 체제의 운영, 중장년층 대상 재교육 · 훈련 프로그램 개발 · 운영 등이 소기의 성과를 달성하기 위해서는 이를 지원하는 법적 체계가 함께 강구되어야 함. 예를 들어, 성인 재교육 · 훈련 결과의 사회적 · 공식적 인정을 위한 관련 법령의 제 · 개정이 필요함.

□ 이와 함께 성인들의 교육훈련을 개인 및 기업 대상으로 지원해 줄 수 있는 재정정책 방안이 강구되어야 함. 현재 우리 나라에는 고용보험기금이 조성되어 이를 재원으로 직업능력개발사업을 추진하고 있음. 향후 이러한 재원 확보 및 활용 체계의 개선이 지속적으로 이루어질 필요가 있음.

4. 학교와 노동시장간의 연계를 위한 자격제도

가. 주요 정책 이슈

1) 실제 직업활동과 자격기준과의 밀접한 연계

□ 우리 나라의 경우 현 자격제도의 문제점은 학교에서 배운 직업기술교육훈련 내용과 노동시장에서 필요로 하는 직업기술, 그리고 자격기준이 상호 밀접히 연관되어 있지 못하다는 데 있음. 즉, 실업계 고등학교의 경우, 학생들은 자기 전공분야 자격증을 취득하기 위해 학원에 다녀야 하는 상황이 벌어지고 있음.

□ 이는 교육훈련기관과 기업간의 협력관계가 부재하거나 미흡하여 노동시장에서의 직업기술 수요가 제대로 교육훈련기관에 전달되지 못하고 있기 때문임.

2) 직업활동과 교실수업과의 연계

□ 직업활동에 맞추어 자격기준을 설정하고 자격시스템을 운영할 경우, 가장 효율적인 교육훈련 방법은 직업활동과 교실수업간 연계를 강화하고 가능하면 이를 통합하여 운영하는 것이라 할 수 있음. 도제제도는 이러한 직업활동과 교실수업간의 연계를 제고하기 위한 대표적인 예라 할 수 있음. 도제제도를 통하여 학생은 직업생활에서 필요로 하는 직업기술을 배우고 자연스럽게 자격까지 취득하게 됨.

□ 자격제도가 학교교육에 초점을 맞추어 설계되었을 경우와 실제 직업활동에 초점을 맞추어 설계되었을 경우간에 자격제도가 개인에 미치는 영향이 달라질 수 있음. 예를 들어, 후자의 경우 학교교육만을 받은 사람이 자격을 취득하는 것이 직업활동 경험이 있는 사람에 비하여 힘들 것임. 그 반대로 체계적인 교육훈련기관 교육과정에 기초하여 자격기준이 설정되었다면 직업활동 경험을 통하여 필요 기술을 습득한 사람은 자격을 취득하는 것이 쉽지 않을 것임.

3) 선행 학습 결과 및 경험 인정

□ 향후 지식기반 경제사회에서의 자격제도를 개선함에 있어 고려하여야 할 중요한 사항 중의 하나로 경험을 통하여 획득한 학습에 대하여 학점 또는 자격을 부여하는 것을 들 수 있음. 선행학습 결과 인정은 처음에는 성인들의 계속교육기회 확대를 유도하는 차원에서 도입되었으나, 최근에는 성인 직업교육훈련체제를 보다 유연하게 변화시키고 직업능력의 투명성을 높이기 위한 정책대안으로 발전하고 있음.

□ 선행 학습 및 경험에 대한 인정 기준, 절차 및 인정결과의 활용 방식은 해당 국가의 사회경제적 특성에 따라 다양하게 나타남. 대개의 경우, 인정을 위한 엄격한 기준과 절차를 설정하고, 인정단위의 누적에 따라 필요 자격과 학력을 인정해 주는 방식을 취하고 있음. 각국의 실정에 가장 적절하게 맞는 제도의 정립이 요구됨.

나. 주요 정책

1) 새로운 직업수요에 맞는 자격체제의 정비

□ 노동시장 및 직업세계의 직업기술 수요에 맞는 새로운 자격체제를 개발하는 작업이 필요함. 현재 및 미래 직업 기술 수요에 기초한 자격체제는 직업기술교육훈련 기관의 교육과정 개발 및 적용에 그대로 반영되어 효율적이고 효과적인 교육훈련 프로그램 운영에 크게 기여할 수 있음.

□ 새로운 자격체제의 정비에는 산업체 현장 인력이 직접 참여할 수 있어야 할 것임. 실제 필요한 직업기술 및 정보가 무엇인지 그리고 이것들이 앞으로 어떠한 방향으로 변화할 것인지를 정확하게 아는 사람이 자격기준 및 인정 방식의 설계에 참여하여야 함.

2) 선행 학습 및 경험에 대한 평가 인정 체제 구축

□ 직장에서의 실무 경험을 통하여 습득한 직업 기술 또는 개인이 근무하고 있는 직장에서만 인정하는 자격 등을 사회적으로 공식 인정하여 통용할 수 있도록 하기 위하여 선행학습 평가인정체제를 구축·운영할 필요가 있음.

□ 이러한 선행학습 평가인정체제는 상기 자격체제와 밀접히 연관되어 운영되어야 함. 평가 인정체제는 기업체, 노조, 직능단체, 자격 관련 기관 등의

광범위한 참여 하에 상호 합의된 방안 도출이 전제되어야 성공할 수 있음. 정부는 이를 위한 행·재정적 지원 방안을 강구할 필요가 있음.

3) 자격의 국제 통용성 확대

□ 세계화가 급진전되면서 노동인력 및 지식의 국제 이동이 그만큼 자유로워지고 빈번해짐에 따라 국제적으로 통용되는 자격제도 확립의 필요성이 국제기구를 중심으로 부각되고 있음. 이는 직업기술교육훈련의 국제화를 유도하여 교육훈련의 효과성 제고에 크게 기여하게 될 것임.

□ 이를 위해 가장 공통된 내용이 많은 부분부터 단계적으로 국제 통용 자격제도를 개발·적용하는 것이 필요함. 우선 이해관계가 맞는 두 나라간에 협의하여 개발·적용한 후 이러한 경험을 토대로 다자간 협의를 통하여 그 적용 범위를 확대해 나가는 방안을 검토할 수 있음.

5. 인적자원개발을 위한 국가 전략

□ 향후 국가 인적자원개발 정책 논의에서 심도있게 다루어야 할 정책 관련 주요 이슈들을 몇 가지 제시하고자 함. 여기 제시한 이슈는 향후 국가 인적자원개발 정책을 보다 정교하게 수립·집행하여 그 효과성과 효율성을 제고하기 위해 필수적으로 해결하여야 할 정책과제라고 할 수 있음.

가. 지식기반사회로의 진전에 대한 교육·훈련 부문 대응의 적절성

□ 지식기반사회에서 지식은 개인, 조직, 그리고 국가의 경쟁력을 결정짓는 가장 중요한 요인임. 새로운 지식을 창출·확산·활용할 줄 아는 능력을 기르기 위하여 보다 높은 수준의 교육·훈련을 받을 필요성이 크게 부각

되고 있음. 학령 인구를 대상으로 하는 정규 교육뿐만 아니라 이미 정규 교육기관을 떠나 노동시장에서 일하고 있는 성인을 대상으로 하는 성인 교육·훈련이 기존 수준 이상으로 개선될 것을 요구받고 있으며, 개인들도 지금보다 훨씬 높은 수준의 교육·훈련을 받고 새로운 능력을 함양할 것을 요구받고 있음.

□ 그러면 과연 어느 정도까지 높은 수준의 교육·훈련을 받아야 하는가? 이 문제에 대한 심층적인 논의가 필요함. 산업구조가 지식기반산업 중심으로 고도화되어가고 있다 할지라도 여전히 적지 않은 부분은 저숙련 노동자를 필요로 할 것임. 지식기반 경제화가 어느 정도의 속도와 범위를 가지고 진행될 것인지에 대한 정확한 예측을 할 수 있다면, 인적자원개발 정책을 효율적으로 수립·집행하는데 큰 도움이 될 것임. 현재는 이에 대한 논의와 정보 분석이 부족한 실정임. 이에 대한 심층적인 연구가 필요함.

나. 인적자원개발 정책의 성공적 실현을 위한 부처간 협력

□ 인적자원개발과 관련된 교육·훈련 정책이 소기의 목적을 실현시키기 위해서는 이들 정책간 유기적인 연계가 필수적임. 이제까지 우리 나라의 경우 실업계 고등학교나 전문대학에서의 직업교육정책은 교육부에서, 성인 대상 직업훈련정책은 노동부에서 각각 정책을 수립·집행하여 왔는 바, 유관 정책에 대한 양 부처의 사전 및 사후 협력이 거의 전무하였음. 이러한 문제를 해결하기 위하여 한국 정부는 2001년 1월 교육부를 교육인적자원부로 개편하고 그 장관을 부총리로 승격시켜 인적자원개발에 관한 정책을 총괄·조정하도록 한 바 있음.

□ 성인 대상 직업훈련이 효과적으로 수행될 수 있도록 하기 위해서는 피훈련생에 대한 수강료 지원, 육아 서비스 제공, 기업주에 대한 인센티브 제공 등 여러 가지 관련 정책들이 하나의 패키지로 종합적으로 추진되어야

함. 이는 관련 부처간 뿐만 아니라 중앙정부와 지방정부간, 그리고 정부와 민간기업간의 유기적 연계・협력체제의 구축・운영이 필수적임을 시사하는데, 이러한 연계를 가능하게 하는 제도적 장치(위원회, 법령 등)나 조건 등에 대한 논의 및 best practice의 분석・확산 등의 작업이 필요함.

다. 인적자원개발 정책의 추진 비용 부담

□ 모든 정책 추진에는 비용이 소요됨. 이때 제기되는 핵심문제는 '누가 어느 정도의 비용을 부담하여야 하는가? 그 근거는 무엇인가?'라고 할 수 있음. 인적자원개발 정책과 관련하여 대표적인 비용 부담자로서 정부, 기업, 그리고 개인을 들 수 있음. 정부는 시장실패를 방지하기 위하여 교육・훈련 정책에 예산을 투입하고 있으며, 기업들의 인력스카웃(poaching) 문제 해결을 위하여 기업들에게 훈련부담금 지급을 의무화하기도 함.

□ 최근 들어 교육・훈련의 중요성이 부각됨에 따라 교육・훈련에 대한 수요가 늘어나고 비용 부담 문제가 중요한 정책이슈로 대두되고 있음. 정부에서는 가급적 인력의 주 수요자인 기업의 부담을 늘리는 방향을 고려하고 있음. 기업은 이에 대해 수동적・방어적 입장을 보이고 개인 또한 비용 부담 문제에 대한 인식이 낮은 수준임. 우리 정부, 기업, 그리고 개인은 어느 정도까지 인적자원개발에 대한 재정적 책임을 부담하여야 하는가?에 대한 심도있는 정책적 논의와 합의가 필요함.

라. 인적자원개발 정책 평가 체제의 구축・운영

□ 인적자원개발 정책과 프로그램 및 기관 운영 등에 대한 효율성/효과성에 대한 평가는 인적자원개발 정책의 수립・집행・수정 등에 직접적인 영향을 미치는 매우 중요한 기능을 수행함. 그러나 현재는 인적자원개발 관련 정책, 프로그램, 기관 등을 과학적으로 평가하는 체제가 미흡하여 정확한 평가를 위한 기초자료가 부족한 실정임.

□ 일반적으로 새로운 정책을 추진하고자 할 때는 우선 정책 목표 실현을 위한 여러 가지 정책대안을 개발하고 이들 대안들의 목표 실현 가능성에 대한 시뮬레이션을 한 후 최적안을 선택함. 그런 다음 소규모의 pilot program을 운영한 후 최종안을 확정하여 추진하게 됨. 이제까지 우리 나라의 정책 추진 관례를 보면, 정책을 수립하여 최초 집행하는 단계까지는 많은 노력을 기울이나, 막상 집행 후에는 추진 상황 및 결과에 대한 평가를 소홀히 하여 왔음. 그리고 정책 입안·정책결정 단계에서도 가능 대안에 대한 정책분석(policy analysis)이 제대로 되지 않고 있음. 이에 대한 논의와 대책 강구가 필요함.

마. 자격제도 및 학습결과 인정체제 확립

□ 인적자원개발 정책이 개인 관점에서 효과적으로 추진되기 위해 갖추어야 할 조건 중의 하나로 자격제도 및 학습결과 인정체제의 확립을 들 수 있음. 자격제도는 학교에서 직업세계로의 효율적인 전이(school to work transition)와 성인 대상 직업훈련의 효율성 제고 차원에서 중요한 기능을 수행함. 학습결과 인정체제도 성인들의 교육·훈련결과를 체계적으로 인정하여 이를 취업 및 승진에 활용할 수 있게 함으로써 개인들에게 계속교육·훈련의 인센티브를 제공하고 조직이나 국가 관점에서 인적자본의 수준과 양을 측정할 수 있는 근거를 제공하는 중요한 기능을 갖고 있음.

□ 우리 나라의 경우, 이러한 자격제도가 제대로 역할을 하지 못하고 있음. 교육·훈련 프로그램에서 다루고 있는 내용, 자격 취득 시험에서 요구하고 있는 내용, 그리고 직업현장에서 요구하고 있는 내용간에 괴리가 있어 교육·훈련기관과 노동시장을 매개하는 역할을 제대로 수행하지 못하고 있음. 또한 성인 학습자의 학습결과를 체계적으로 인정하여 주는 체제가 개발되지 않아 성인 대상 교육·훈련정책 추진에 애로 요인으로 작용하고 있음. 앞으로 이에 대한 정책 논의를 보다 활발히 전개하여 합리적인 정책대안을 마련할 필요가 있음.

바. 인적자원개발 정책에의 적극적 참여 동기 및 인센티브 부여

□ 아무리 좋은 정책이라도 정책 대상자 및 정책 집행자의 적극적 참여가 없이는 성공할 수 없음. 국가 인적자원개발 정책의 핵심분야 중의 하나라 할 수 있는 직업교육·훈련정책이 소기의 성과를 거두기 위해서는 무엇보다도 훈련대상자인 개인과 훈련받은 인력의 수요자인 기업의 적극적 참여가 전제되어야 함. 이는 이들 개인 및 기업체가 - 피교육생으로서 그리고 훈련제공자/조력자로서 - 교육·훈련에 지속적으로 참여할 수 있도록 동기를 부여하고 인센티브를 제공하는 것이 필요하다는 것을 시사함.

□ 기업체에 대하여는 세금을 감면하거나 국가적·사회적 인증서(예, 영국의 IIP, 싱가포르의 PD)를 발급하는 방식으로 인센티브를 부여할 수 있음. 개인에 대해서는 직업교육·훈련비용 지원, 유급·무급 훈련휴가제 실시 등의 방식으로 지속적인 훈련에의 참여를 유도할 수 있음. 이러한 동기 부여나 인센티브 제공은 social partnership 구축을 통하여 더욱 강화될 수 있음. 예를 들어, 정부와 기업간 비용 부담을 포함한 인적자원개발의 책임을 분담하여 각 자가 이에 합의함으로써 인적자원개발의 핵심주체들의 적극적 참여를 제도적으로 유도할 수 있음. 이제까지의 국가 인적자원개발 정책 논의에서는 이러한 문제들이 거론되기는 하였으나, 이를 실현하기 위한 구체적 방안 논의가 미흡하였음. 이에 대한 구체적인 정책방안 논의가 본격화될 필요가 있음.

부록

1. 개회사
2. 환영사
3. 회의일정
4. 참가자 명단

Opening Address

Mr. Wataru Iwamoto from UNESCO,
Mr. Dia-Geun Kang from Korean National Commission for UNESCO, and
Distinguished guests, Ladies and gentlemen,

On behalf of the Korea Research Institute for Vocational Education and Training, KRIVET, I would like to welcome you to the 2001 KRIVET International Conference on Technical and Vocational Education and Training. I would also like to extend a special welcome to the participants from countries in the Asia-Pacific region.

Since its establishment in 1997, KRIVET has conducted many policy-oriented research studies on a national basis in all areas of vocational education and training, and has also tried to promote international cooperation through information exchange and joint research.

As you may already know, last year KRIVET was designated as a Regional Centre of Excellence in the field of technical and vocational education and training by UNESCO. To live up to this recognition, KRIVET has strived to strengthen regional and sub-regional cooperation. This conference is one of the Regional Center's main projects.

The purpose of this conference is to acknowledge the importance of HRD at the national level in a knowledge-based society and to achieve a better understanding of current major trends and issues related to HRD policies through the exchange of ideas and experiences among participating countries.

In the current knowledge-based society, greater emphasis is placed on knowledge as a valuable asset, while the relative importance of the traditional resources of production, namely 'labor' and 'capital', has decreased. The digital revolution, in other words, is replacing the tangible assets of 'labor' and 'capital' with the intangible assets of knowledge and information as key factors of production.

A knowledge-based society not only expands the opportunities for economic growth and productivity gains, but at the same time it poses a major challenge for the countries trying to adjust to this changing environment.

In the present world of accelerating advancement in science and technology, and intense economic competition, human resources development has become a decisive force in the sustaining economic development and technological progress. How to meet the challenges under the new environment has become an arduous and urgent task for all countries, as has the need to devise effective strategies and policies for human resources development.

For an effective human resources development strategy under this new environment and the challenges it presents, I believe national policies should focus on the enhancement of the overall quality and adaptability of the labor force. This is because in a knowledge-based society, growth and prosperity is determined by the individual's ability to create, disseminate, and utilize knowledge.

Under these new conditions, policies should focus on making school education, vocational training, and continuing & recurrent training more effective, and on establishing systematic linkages between school and workplace. Each country, however, should take into full consideration its own economic development and unique environment, when formulating its respective strategies and policies on human resources development.

In light of the Foregoing, KRIVET has chosen "National Strategies for Developing Human Resources through Technical and Vocational Education and Training" as the main theme of this conference.

Under this main theme, we will have three sessions to discuss the following sub-themes: 1) School to Work Transition; 2) Effective Re-skilling and

Re-education for Adults; and 3) The National Qualification System for Linking School and Workplace.

Towards the end of the Conference, we will have a special session, where we will have a chance to hear about the national strategies for developing human resources of two countries, Korea and the United Kingdom. After the presentations, the floor will be open for constructive discussion.

I wish to thank presenters from many countries for the papers which they have prepared for our discussions on these crucial issues. Their papers highlight the major challenges which we all confront as experts responsible for human resources development. Equally, they set some clear priorities for action to meet those challenges, and offer some useful practical guidance for all of us.

I expect that this conference on national strategies for HRD will contribute to a richer and more productive working life for our people. I also hope that the benefits of human resource development will be equitably distributed to all individuals, organizations and states, facilitated by a series of agreements at national and international levels. A high degree of consensus at both levels is needed to successfully carry out the process.

As I conclude my opening remarks, I would like to wish you a successful outcome in this conference. For this, I call for your active participation and look forward to hearing your insightful thoughts and ideas.

Once again I would like to thank you all for your participation and wish you a pleasant stay in Seoul.

Thank you.

Moo-sub KANG
President, KRIVET

WELCOMING REMARK

Yersu Kim
Secretary-General
Korean National Commission for UNESCO

Dr. Moo-sup Kang, President of the Korea Research Institute for Vocational Education and Training, Mr. Wataru Iwamoto, Director of Secondary, Technical and Vocational Education of UNESCO, Distinguished participants, and Ladies and gentlemen,

It is a great privilege for me to deliver a congratulatory remark today at the opening of the 2001 KRIVET International Conference on Technical and Vocational Education and Training.

I would like to express my heartfelt welcome to the eminent experts from all over the world gathering here to discuss and exchange their views on the significant and urgent subjects in the field of vocational education. The topic of this conference is quite relevant and timely to all of us when we consider that, in the era of globalization, the establishment of the national strategies for human resources became an urgent need in every society. I am also strongly convinced that the discussions at this conference will greatly contribute toward the establishment and implementation of national plans for lifelong vocational education and the effective transition from school to work, by re-illuminating the relationship between education, the world of work and the community as a whole.

Ladies and gentlemen,

It is evident that we will not be able to achieve a comprehensive development in society by only focusing on the utilization of physical resources. Rather, it is possible by utilizing both physical and human resources. This view is clearly pointed out in the World Bank's report which was made in the study on the role of education in the East Asian financial shock between 1997-99. This report asserted that all theories of economic growth acknowledge that the physical and human capitals complement each other, and the one cannot function efficiently without the other. In this regard, the development of human resources is crucial for both individual and national capacity building in the modern society and a prerequisite for the sustainable development.

Distinguished participants, and
Ladies and gentlemen,

In order to tackle the challenge of globalization and the revolutionary change in information and communication technology, we are at juncture to reconsider the reform of vocational education. Vocational education of the current society is no longer merely a means to learn technical skills to secure a better position in the labor market. It is strongly demanded to function as a vital element which contributes to the achievement of society's goals for greater democratization and socio-economic development which, at the same time, to the development of the potential of all individuals.

I would also like to emphasize that the national strategies for developing human resources through vocational education require a holistic approach.

I believe that it is from the same perspective that we agreed to adopt Seoul Recommendation at the 2nd International Congress on Technical and Vocational Education and Training held in 1999,m which clearly stipulated in its article 4.8 that ' the commitment to TVE for all requires well designed policies and strategies, increased resources, flexible and appropriate delivery modes, friendly training environments and sensitive an caring teachers and employers.'

Furthermore, the bilateral and multilateral capacity-building cooperation in order to improve the national strategies should be further encouraged. It is my firm conviction that the international gathering such as this conference would greatly contribute toward the establishment, implementation and also to an assessment of national strategies for developing human resources. In view of this particular point, I am pleased to confirm that the Korean National Commission for UNESCO will continue its cooperation with Unesco and the Korean Research Institute of Vocational Education and Training in an effort to promote the technical and vocational education.

I wish that this conference could be a great success, and thank you for your attention.

Conference Program

November 21, 2001(Wednesday)

09:00 - 10:00

Registration

10:00 - 12:00

Opening Session

(Moderator: Ms. Alexyss Hayun Kim / KRIVET)

- Opening Address (Dr. Moo-sub Kang / President of KRIVET)
- Welcome Remark (Dr. Yer-su Kim / Secretary General of Korean National commission for UNESCO)
- Introduction of KRIVET

(Coffee Break)

- Keynote Address "The Need to Innovate and Optimize Resources". (Mr. Wataru Iwamoto / Director of Secondary, Technical and Vocational Education Division, UNESCO HQs)

∗ *Commemorative photographing*

12:00 - 14:00

Luncheon (Eunhasu Hall, 11fl.)

14:00 - 17:00

Paper Presentation Session 1: School to Work Transition (Moderator: Dr. Eun-sang Cho / KRIVET)

(Rapporteur: Dr. Nam-shul Lee, Dr. Young-sun Ra / KRIVET)

- Ms. Katrina Ball. "*School to Work Transition in Australia*". / NCVER, Australia
- Mr. Ho-jin Hwang. "*Main Issues for Effective Transition System for Initial Education to Working Life in Korea*". / Presidential Commission on Education and Human Resource Policy, Korea

(Country Paper)

- Dr. Renato M. Sorolla. "*The School to Work Transition of Graduation in the Trade Technical-Vocational Institutions in the Philippines*" / Philippines
- Dr. Hoang Ngoc Vinh. "*Vocational and Training Education and Training in VIETNAM and Issues of School to Work Transition*" / Vietnam

(Coffee Break) 20 min.

(General Discussion)

17:30 - 19:30

Dinner (*Eunhasu Hall, 11fl.*)

November 22, 2001(Thursday)

09:30 - 12:30

Paper Presentation Session 2: Effective Reskilling for Adults

(Moderator: Dr. Ki-sung Lee / KRIVET)

(Rapporteur: Dr. Ji-sun Chung / KRIVET)

- Dr. Gisela Dybowski. "*Effective Re-skilling for Adults*" / BIBB, Germany
- Dr. Young-hyun Lee. "*Adult Re-skilling in Korea*" / KRIVET

(Country Paper)

- Dr. Masriam Bukit. "*The National Qualification System for Linking Schools and Workplace in Indonesia*" / Indonesia

(Coffee Break) 20 min.

(General Discussion)

(Special Presentation)

- Dr. Ki-sung Lee. (Presentation on the direction of the 2002 KRIVET Regional Center's Work-plan and Survey on the needs of the training program in the field of VET in this region)

12:30 - 14:00

Luncheon (Mujigae Hall, 11fl.)

14:00 - 17:00

Paper Presentation Session 3: The National Qualification System for Linking Schools and Workplace

(Moderator: Dr. Myong-hoon Shin / KRIVET)

(Rapporteur: Dr. Hyun-soo Kim / KRIVET)

- Ms. Annie Bouder. "*The National Qualification System for Linking Schools and Workplace*" / CEREQ, France
- Dr. Jeong-yoon Cho. "*The Current Status of National Technical Qualification System in Korea*" / KRIVET

(Country Paper)

- Mr. Silamay Sopraseuth. "*National Qualification System*" / Lao P.D.R.
- Mr. Sahar Darusman. "*The National Skill Qualification System Framework in Malaysia*" & "*Brief on Human Resources Training Programme in Malysia*" / Malaysia

(Coffee Break) 20 min.

(General Discussion)

17:30 - 19:30

Dinner (*Yongsusan*)

* *Night Bus Tour after Dinner*

November 23, 2001(Friday)

9:30 - 12:30

Special Session: National Strategies for Developing Human Resources
(Moderator: Dr. Sung-Joon Paik / KRIVET)
(Rapporteur: Dr. In-sun Shim / KRIVET)

- Dr. Brendan Barker. "Vocational Education nd Training in the UK" / the British Council in Korea, United Kingdom
- Dr. Ki-oh Jeong. "*National Human Resource Planning: Issues and Problems*" / Director-General, the MOE&HRD, Korea

(General Discussion)

(Closing)
- Dr. Sung-Joon Paik / KRIVET

12:30 - 14:00
Luncheon (*Mugunghwa Hall, 3fl.*)

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직업기술교육훈련 국제회의 결과보고서

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보고서 내용의 무단 복제를 금함 〈비매품〉

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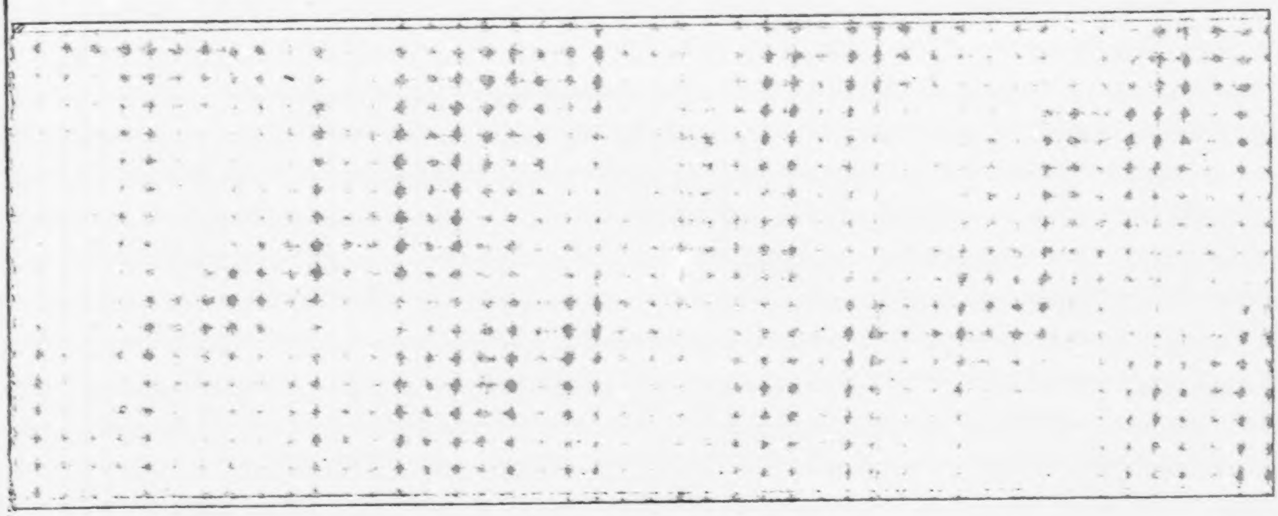

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